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Parkinson's Disease: Rehabilitation Aspects

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National Society for
Crippled Children and Adults

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REHABILITATION LITERATURE

Article of the Month

Parkinson's Disease Rehabilitation Aspects

Robert S. Schwab, M.D.
and
Albert C. England, Jr., M.D.

About the Authors . . .

After receiving an A.B. degree from Harvard University and B.A. and M.A. degrees from Cambridge University and St. John's College, with honors in physiology, Dr. Schwab earned his M.D. degree at Harvard Medical School in 1931. The next year he studied neuropathology in Munich, Germany, where he returned in 1957 as a Fulbright Exchange Professor at the University. Dr. Schwab has been director of the Brain Wave Laboratory, Massachusetts General Hospital, since 1937, except for the years 1941 to 1946, spent with the U.S. Navy Medical Corps. He is also neurologist, Massachusetts General Hospital, and assistant clinical professor of neurology, Harvard Medical School, in addition to serving as consultant in neurology for several hospitals and the U.S. Veterans Bureau. From February to June of this year, he served as consultant for a U.S. Public Health study of familial parkinsonism and amyotrophic lateral sclerosis on Guam.

Dr. England was graduated from Harvard College summa cum laude and received his M.D. degree from Harvard Medical School in 1937. After medical internship and neurological residency, he spent the years 1941 to 1944 with the Army Medical Corps. Dr. England is assistant in neurology at Harvard Medical School and at Massachusetts General Hospital, where he is an associate at the Brain Wave Laboratory and a member of the Parkinson's Disease Research Project. He is also neurologist in the medical department, Massachusetts Institute of Technology.

Both Dr. Schwab and Dr. England have written many papers and publications in neurology and Parkinson's disease.

THERE IS NO GREATER CHALLENGE in the field of rehabilitation than that presented by Parkinson's disease. It is estimated that between 400,000 and 500,000 patients have this disorder in the United States. To be sure, the symptoms of some are so mild there is no problem of rehabilitation. One can assume, however, that at least 80 percent of our patients with this disease present some very specific need. About 5 percent of these are so severely affected that they are bedridden, total invalids, and beyond the scope of any reasonable effort at rehabilitation. These sad and pathetic patients are in chronic hospitals or in nursing homes; few are in their own homes with nurses to look after them. A reasonable estimate is that 250,000 patients would greatly benefit from a carefully worked out plan of rehabilitation, which would make their lives more pleasant and tolerable and give them an increased amount of independence in performance of the usual chores of living.

This is, then, a tremendous challenge to our national medical resources. There are five basic fronts involved in the program of rehabilitation of such patients. All five must be brought into action where needed to achieve success. The first would be given the broad term *general medical*. Nutrition is such an important aspect that a separate category will be used.

1. General Medical

Under the category of general medical would be included correction, improvement, or management of any cardiovascular abnormalities such as high blood pressure and of any cardiac involvement such as coronary disease. Abnormalities of renal function, as shown by examinations of

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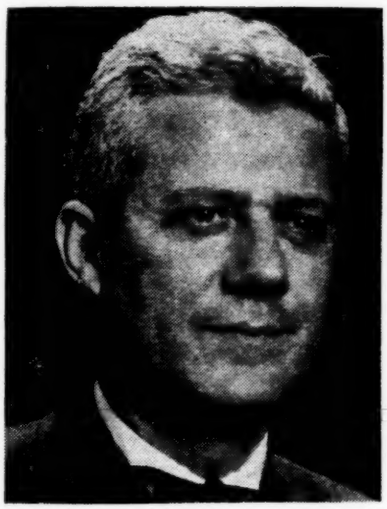
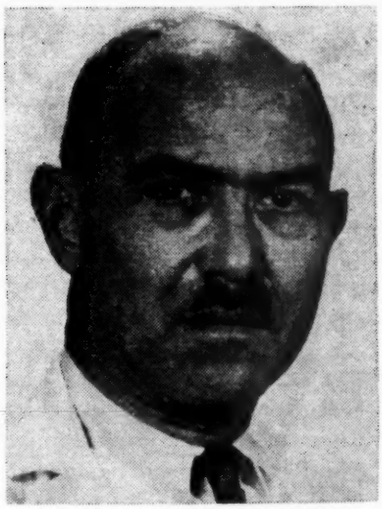


Dr. England



Dr. Schwab

the urine and by the nonprotein nitrogen blood level, must be taken care of. It is very important to keep a sharp eye on the cardiac reserve of patients with Parkinson's disease, since exercise and physiotherapy cannot be safely pushed in the face of coronary insufficiency or anginal pain. Patients with symptoms of moderately advanced Parkinson's disease have difficulty in maintaining a normal, efficient, even respiration, in handling secretions associated with a severe cough, and in obtaining enough oxygen to keep their blood saturated during ordinary exercise. Therefore x-ray films of the chest must supplement a careful physical examination to be sure any pulmonary disease complication present is taken care of. We have uncovered three unexpected cases of tuberculosis in this way. After favorable results with the new drugs, the patients can go on with the rehabilitation plan.

About half the patients have a natural constipation, resulting from the disease, usually aggravated by the drugs used. If constipation is neglected, a few may develop intestinal obstruction as a long-term complication. Any kind of mass, enlargement of the liver, or unusually palpable colon, particularly in the splenic flexure, should be looked for during the initial examination, and every effort made to correct and manage abdominal discomfort, malfunction, or irregular elimination by cathartics, diet, and adequate fluid intake. It is known that the voluntary muscles involved in micturition and in defecation do not work normally in these patients. Therefore, one has to be mindful of the bladder function and maintain it efficiently. Male patients are in the age group in which are found prostatic hypertrophy and difficulty in passing urine. This should be looked for in the initial examination and proper steps taken to correct dysfunction by surgery if required. Sometimes a urologist must be called in to be sure that the condition is not surgically operable, as in an obstruction of the prostate.

General medical supervision must include examination and care of the skin. Ulcerations and pressure sores in patients who spend a great deal of their time in chairs have to be kept under scrutiny and treated or prevented by use of especially padded chairs and by gentle massage of the skin when there is redness or a tendency to ulcerate.

Since the most difficult of the general medical problems connected with patients with Parkinson's disease is the strong tendency toward constipation, we will consider it in more detail before going on. There is, of course, a general increase in the difficulties of regular elimination as one goes into the geriatric age group; this must be regarded as a sort of baseline here. Motor inability and the tendency to remain in fixed positions for long periods of time encourage intestinal stasis, retention of fecal matter, and the difficulty with daily evacuation, which was perhaps easy before the disease became manifest. The difficulty in initiating normal voluntary control of the muscles involved in defecation, such as the abdominal muscles and diaphragm, form part of this picture. The patient with Parkinson's disease who was reasonably active may have some difficulty in handling a normal defecation because of mild akinesia of the muscles used in this voluntary act.

Many patients with moderately advanced disease lose a good deal of their saliva by drooling. This does not mean that their saliva is formed at a faster than normal rate. The normal automatic swallowing of the secretions from the mouth and pharynx are interfered with, and saliva accumulates in the mouth and runs between the lips. The patient with Parkinson's disease loses his upright posture. Because he is stooped over both when walking and when sitting, he has a definite mechanical or gravity difficulty in swallowing his saliva. Some patients report that this difficulty disappears when they lie down. The significance of this lost saliva, which is more of an embarrassment to the patient at the time it drips from his mouth, is the loss

to the body of this very important secretion of the salivary glands with its mucous and digestive ferments. The intestinal tract is deprived of an essential ingredient for maintaining normal peristalsis and evacuation. In addition, since these patients have difficulty in drinking fluids from glasses, they tend to be partially dehydrated, not only from losing their own saliva but because they take in a very inadequate amount of fluid each day with and between their meals. All this tends to dry up the normal intestinal contents and make evacuation more difficult.

To compound what has just been said as the cause for the constipation, effective therapy from the pharmacological standpoint is related to drugs such as belladonna derivatives or synthetic products such as trihexyphenidyl (Artane) hydrochloride and procyclidine hydrochloride (Kemadrin), all of which interfere with the normal secretions of glands such as the intestinal. The intestinal contents become dried still further and normal reflex movement decreased within the intestinal tract and during evacuation at the time the bowel movements are ordinarily done.

A very careful, specific, and sometimes heroic program is thus required to maintain adequate intestinal elimination. A daily movement is not necessary, of course, with patients who are severely or moderately involved with parkinsonism, but it is absolutely essential that some regular movement take place at least every 48 hours. Gastrointestinal specialists consider enemas not a good way to handle this until the patient is so invalided and helpless that there is no chance of ordinary normal evacuation. One must, then, resort to a very specific program of liquid ingestion between and during meals so that adequate fluids are swallowed. The diet should allow for roughage adequate to maintain intestinal tone. Finally, a continual daily intake of a laxative may be needed.

Laxatives must be gentle and mild so that diarrhea does not occur, but a well-formed daily movement, or one every other day, should be performed by these patients without fatigue or difficulty. Cathartics containing mineral oil, agar agar, and sometimes some phenolphthalein, or even cascara, should be mixed up according to the physician's experience as to the most effective cathartic. Usually each physician handling patients with Parkinson's disease will work out his own cathartic formula—one that is most satisfactory, least upsetting, and most regular in function.

2. Nutrition

Nutrition is next in importance in arranging the rehabilitation program. Seventy-five percent of our patients with Parkinson's disease have trouble maintaining normal nutrition. They may lose a very small amount of weight, but their weight generally goes downward over the years. If this is not considered as a challenge to the physician looking after the patient, a state of serious malnutrition will be reached. For example: A man whose normal weight is 165 pounds develops Parkinson's disease at the age of 58 years. For the first year or two he is active in spite of his tremor and rigidity and his weight is fairly constant. Then, as he begins to find that he is slower in eating and it is more difficult to cut his meat, butter his bread, and clean his plate in a normal manner, his weight slowly begins to go down. While his family consume their normal calories in 45 minutes at the table, he takes in only 75 percent of his required nutrients during the same period. Pride and an unwillingness to force the other members of his family to remain at table, while he goes along in a slow and deliberate way in feeding himself, force him to neglect important calorie items on his plate. Some of his food returns uneaten to the kitchen.

Again, when this man goes out to a restaurant, the embarrassment of eating slowly and the tendency so many of these patients have, to spill and make embarrassing messes on their clothes, makes him extradeliberate and cautious in eating. He avoids certain items he might otherwise like because of the difficulty in getting them to the mouth. Chewing and swallowing are slower. The dryness in his mouth, possibly caused by his medicine, complicates the speed of chewing and swallowing, and he finds that, even though he may have ordered an adequate meal with the calories he should have, he turns away perhaps 50 percent of it.

When this is brought to his attention, he says, "Oh well, I don't want to embarrass my family or my friends. I will eat later when I get home." Upon returning home, he does not do this. He does not want to go to the trouble of going to the icebox and taking a supplementary snack, nor does he complain about the lack of calories. He does not feel at the time any pressing hunger, and slowly and insidiously one finds that here is a man taking in each day a smaller amount of calories than his basic requirements indicate. For a while, since a great many individuals are overweight, the slow loss of weight causes no impairment in his function, but as he begins to enter an early stage of malnutrition he starts noticing fatigability and weakness in his voluntary muscles.

Of course, when this has been reached, there is no adipose reserve that he can draw on. He has lost and consumed all the fatty tissue he put on in his earlier days. He is now consuming some muscle tissue and his own joint tendons and sinews, and the mineral matters that he has neglected to take into his diet now are pulled out of his bones, so that, when he is 15 to 25 pounds underweight, x-ray examination will reveal a very definite osteoporosis in most of the long bones and pelvis, a good part of his supporting skeleton. This loss of mineral matter in the bones, of course, weakens the strength of these bones. The muscle tissue that ordinarily pads some

of the long bones and supporting elements, such as the pelvis, has been reduced by the loss of muscle substance. So, here again, is a two-edged sword: a loss of protecting muscle substance and a loss of the structural chemical elements within the bones itself. It is no wonder then that a gentle fall onto the floor causes a serious fracture of the femur or even pelvis. Ten years before, with normal body weight, the same fall would have resulted in nothing more than an irritating bruise.

We have noted over the years that patients can go down to as low as 100 pounds in weight, where their normal weight was 160 pounds. They have lost nearly 40 percent of their body substance over a period as short as 5 years. It is no wonder they are unable to move around without excessive fatigue and exhaustion. All this pushes them into a much more dependent group than if they had maintained their weight. It has been thought that the tremor and the increased muscle tone causes burning up of additional calories, causing weight loss, but there seems to be no basic evidence of this except in patients with an excessive amount of rigidity and tremor.

IN THE FOLLOWING LIST of mechanical aids, patients with Parkinson's disease may find certain items that can help them adjust to their handicaps.

1) Bowling shoes to avoid stumbling.
2) Elastic shoe laces not requiring tying.
3) Raised toilet seats.
4) Extra handles on walls near doors.
5) Scissors to cut meat with instead of a knife.
6) Electric plate warming tray to keep food warm for those who take a long time to eat.
7) Special clothes, as those designed by the Institute of Physical Medicine and Rehabilitation, New York, which make dressing easier.
8) Electric rocking chair for mechanical exercise of ankles, knees, hips, wrists, elbows, and shoulders for those who cannot otherwise exercise.

In a few patients it is true that their basal metabolism rates, radioactive iodine uptake, and protein-bound iodine levels would be in the higher levels of normal. This means, therefore, that in them the metabolic burning up of tissues is higher than necessary for their particular pattern of life. This excessive demand of energy makes it more difficult to maintain weight and such patients lose weight faster than patients who have low levels of metabolic function. When this situation is encountered, namely, when the levels of metabolic function are in the higher ranges of normal, or even in the beginning ranges of hyperthyroidism, we have found that maintaining weight is well-nigh impossible, even if one prescribes as many as six meals a day. Furthermore, this increase in metabolic activity increases the tendency towards tremor, restlessness, and difficulty in sleeping and relaxing. When increased levels of metabolism and steady weight loss are found in patients, a good procedure clinically is to depress their metabolism by a small measured dose of radioactive iodine. In 2 months this results in metabolic levels that are above that of myxedema, but in the hypothyroid or low-normal range. Such patients can then maintain their weight and even restore pounds previously lost on the same caloric intake that was formerly inadequate.

We have 30 patients in this group, out of about 90 in whom metabolic levels were measured. A patient with normal thyroid function and a normal level of metabolic activity of course will not benefit at all by having his metabolic level reduced to one of hypothyroidism close to the myxedema range, and indeed he will be more helpless and miserable than if he were left alone. Patients, however, who have had their metabolic levels reduced so that the 24-hour uptake of radioactive iodine is in the range of 5 per cent and the protein-bound iodine blood level around 2 or 3 mcg. per 100 ml. will be much more able to maintain their weight, will feel better, have less tremor, and will function more efficiently.

It has been found experimentally that, if a hospital patient with Parkinson's disease is forced to take in calories, or, in the home, if a neighbor can visit a patient two or three times a day to see that calories are taken in adequate amounts from the tray of food, patients' weight will slowly climb. The slow, steady downhill course of weight loss can be reversed, and in several months the weight will slowly creep back, to a level of 160 pounds from a low of 140 pounds, for example. As soon as the patient is left alone, however, the tendency to lose weight will manifest itself once more.

A gratifying result of successful neurosurgery that alleviates disabling tremor and rigidity is an increased ability to take normal calories and the return of weight to a level compatible with normal muscular function and ability. Patients whom we have seen slowly go down from around 150 pounds to 100 pounds have had their rigidity and tremor relieved on the dominant side by a successful operation in the thalamus of the contralateral hemisphere. Slowly over a period of a few months they regained their previous weight. They became much stronger and more able to do things they were not able to do for several years.

Weight loss is sometimes accepted by clinicians as good for the vascular system. It sometimes encourages the patients to keep their blood pressure low and to avoid coronary disease. While it is true that excessive weight is something to be frowned on and avoided, in the majority of patients with Parkinson's disease excessive weight is not a problem. Only 3 percent of our patients fit into this category of excess weight.

3. Physiotherapy and Exercise

It is difficult to arrange for housebound patients' getting adequate physiotherapy from visiting physiotherapists even if they live in the same neighborhood. Patients who need this treatment sometimes can obtain only one visit every two weeks. This is a waste of time, since the patients will usually be totally unable to do the exercises themselves, and very few relatives are experienced or understanding enough to do correct physiotherapy at home, even when they watch a physiotherapist perform. The exact amount of formal physiotherapy necessary to keep a patient with this disease in a reasonable state of health and to encourage rehabilitation has not been worked out. One-hour sessions might do something, but, obviously, twice-a-day hospital sessions, for example, would accomplish more good than sessions three times a week. Patients who are ambulatory have less need for physiotherapy. This means that, the more dependent the patient is, the less he is able to go out to the physiotherapist's office or clinic or rehabilitation center to get needed treatment. The healthiest patients with Parkinson's disease would find this the easiest thing to do, but they need the treatment the least.

It is further significantly true that going through the motions of getting a patient dressed, putting him into a taxi, and taking him to a clinic for therapy is probably one of the best things one can do for him. The travel in the car, the effort of getting dressed, and the handling of elevator and stairs are good, even if the physiotherapy is very short and limited. However, it is often very difficult for relatives to find the time to do this. Patients in great need of physiotherapy are quite unable to do it for themselves. There does not seem to be any easy solution to the problem. Most nursing homes taking care of patients with severe Parkinson's disease do not have anything like adequate facilities for daily physiotherapy, and the nurses who usually work in such institutions can do nothing more than the simplest flexion and extension of the joints when they make their rounds. This is almost totally inadequate.

In the United States, there are no special institutions devoted entirely to the medical rehabilitation of patients with Parkinson's disease. At Kassel, in West Germany, one has been in operation for 25 years. The institution has about 125 beds, all occupied by patients with parkinsonism. In this clinic, called the Königin-Elena Klinik, the plan of treatment for patients sent there for rehabilitation specifically is to keep them occupied during the entire day with forms of therapy that can be of benefit to them. Physiotherapy is a major aspect of this regime. Each patient is assigned a certain hour after breakfast for participation in a certain form of therapy. Some would walk for an hour with another patient, outdoors in the spring, summer, or fall. They frequently improvise, so that a patient who does not swing his left arm is mated, so to speak, by two 8-foot sticks, to a patient who does swing his left arm. In this way the patient who swings his left arm pushes the arm of the other patient, who is either in front or behind him, into some form of associated swinging. The opposite occurs on the other side. This kind of exercise is augmented by having steps marked on the ground at a suitable distance apart, say 20 inches, so that patients will take long steps and try to avoid the *petit-pas* that is so common in patients with Parkinson's disease.

These forms of outdoor exercises can be supervised by one person, and a half dozen patients can participate. Another hour in the day might be assigned to gymnastics, tumbling, or mat exercises, with groups of 10 to 15 patients with one therapist in charge. Another hour would be spent in group therapy for speech, with exercises, singing, and enunciation, an important phase of rehabilitation. Another hour might be devoted to individual physical therapy, in which passive flexion and extension of the joints, particularly those most rigid, would be part of gentle but strong physiotherapy. If certain joints were beginning to show deformity, traction in various forms using springs or weights would be given during this period. In other sessions, either group or individual, patients would be instructed in using fingers, with various occupational tasks designed to reteach certain movements, particularly lost associated movements.

The day, from about 7:30 A.M. to 6:30 P.M., is thus divided into hour sessions in which each patient participates as hard as he can. In addition to this, drug and other medical treatments are initiated when necessary. Nutrition is watched, elimination and constipation taken care of, and on the whole this is an ideal, theoretically perfect set-up of total push in rehabilitation.

The average patient remains in this hospital around three months, then is sent back to his own doctor near his home. Unfortunately, neurologists in Germany find that, while these patients gain a considerable amount while in this special hospital, they may lose their gains in a year or so after return to their homes. They go back into their environment without their rehabilitation program. The director of the Klinik, Dr. H. P. Schulz, maintains, however, that 60 percent of the patients who successfully complete their 3 months' rehabilitation program continue with some of the exercises, at least, at home and maintain a better level of performance and activity in their home environment. Some come back for "postgraduate" reinforcement of the therapy after a lapse of a year or two.

It is discouraging to realize that all the efforts on behalf of patients in this hospital may only be of temporary value. On the other hand, if there were more hospitals of this type throughout the world, it might be possible to reinforce such a period of intense activity for a

month or so each year, and a large number of patients might thus be benefited. One trouble, of course, with this type of intensive, all-day therapy is that it is usually avoided by a patient who is only mildly involved; only when he becomes desperate does he enter such a clinic and he is then beginning to show definite signs of progression of the disease. One cannot expect to get the good result in these patients that one would hope to in a patient who began in the early stages of his disease. This also occurs in patients with mild cases who are unwilling to embark on any sustained, regular physiotherapeutic program. We cannot, at the moment, state definitely that, if a patient does not seriously pursue vigorous physiotherapy daily when his disease is mild, it will soon advance. Nor can we predict that there is any chance that faithful, daily physiotherapeutic sessions will prevent the disease from progressing.

In Boston, at the Lemuel Shattuck Hospital, a chronic disease hospital supported by the Commonwealth of Massachusetts, it was hoped that an intensively pursued rehabilitation program would restore patients becoming invalided by Parkinson's disease to a better state of health. Here again, admissions to this hospital have been largely limited to those patients who have become progressively worse and are in a partial invalided state. It is, perhaps, too late for them then to get the full benefit of this kind of program; although they may be in the hospital as long as 3 or 4 months, on discharge their benefits can scarcely be measured by objective means. If we could persuade the mildly affected patient to enter such a rehabilitation hospital for a month or so, to learn and understand how important rehabilitative physiotherapy measures can be to him, we might be able to slow down progression in this disease, but there is no way of being certain about this.

It is generally agreed that the most valuable manipulations in physiotherapy are exercises that stretch the rigid muscles around a joint, gentle massage, corrective gait and stance exercises, and supervised voluntary efforts to relearn lost associated and co-operative movements. Such exercises usually are followed by better function. Certainly nothing is to be gained by prolonged massage, hot tubs, or radiant heat; they result only in fatigue and the exhaustion of the patient. Brief, repetitive sessions during the day might be of greater benefit than a long session given once a day.

We have designed and described elsewhere a mechanical machine, an electric rocking chair,[1] which can be used at home by patients several times a day passively to flex and extend the ankle, knee, and hip, on both sides, as well as the wrists, elbows, and shoulder joints. This exercise, performed by the chair, is done about 18 times per minute and does give the patient at home a chance to get at least a certain type of physiotherapy several times a day. Unfortunately it is not considered a wise investment of funds by most patients when they are only mildly affected with the disorder. They tend to postpone the purchase of such a piece of equipment, which costs $375, even though it is made at cost through the Parkinson's Fund at the Massachusetts General Hospital, Boston. Such a chair is not usually bought until the patient is a partial invalid. Again we must emphasize the fact that, although most patients feel they have been helped a good deal, the benefits of such a unit probably are reduced because of the advanced condition of patients who finally obtain them.

4. Drug Therapy

Drug therapy has been used in Parkinson's disease for the past 75 years. Most physicians are familiar with this therapy and it is usually employed initially when the diagnosis is certain. Various drugs, usually resembling in action atropine or the natural alkaloids of the belladonna root, make up most of the pharmacological preparations now available for use in this disease. Nearly all these drugs, if taken in adequate amounts, will reduce rigidity and subdue tremor to a certain extent, but often the patient has a certain degree of dry mouth, blurring of vision, marked dulling of intellect, loss of memory, or a marked tendency to be confused, particularly at night. The penalties of an ingestion of drugs to reduce tremor may be side effects more disagreeable than the symptoms.

A phenothiazine that does not usually itself produce parkinsonism, namely, ethopropazine (Parsidol) hydrochloride, is very useful in reducing tremor. If it is steadily increased in milligrams per dose, the tremor will soon be remarkably reduced, but the patient may be so dull, confused, and lethargic that he is better off, as far as he and his relatives are concerned, to have the tremor without the mental changes. One can partially neutralize the lethargy and drowsiness by giving amphetamine. This is not as easy as it sounds and sometimes is achieved at the expense of an insomnia that plagues the patient at night.

The whole success of drug therapy, such as it is, is a compromise, where medicine is given until slight side effects are encountered. The dose is then slightly reduced, and the patient is more or less forced to put up with a partially beneficial effect plus a few mild side effects. In our experience one does not reach more than 25 percent improvement or reduction in a particular group of symptoms with these drugs without encountering intolerable side effects.

The tailoring to suit the individual patient's needs of the available drugs requires a great deal of time and interest of the physician, as well as full co-operation on the part of the patient and his family. It has been asked by intelligent patients and their relatives whether in some instances a very early embarkation on a pharma-

[1] England, A. C., and Schwab, R. S., The management of Parkinson's disease. *A.M.A. Arch. Internal Med.* 104:439-468, Sept., 1959.

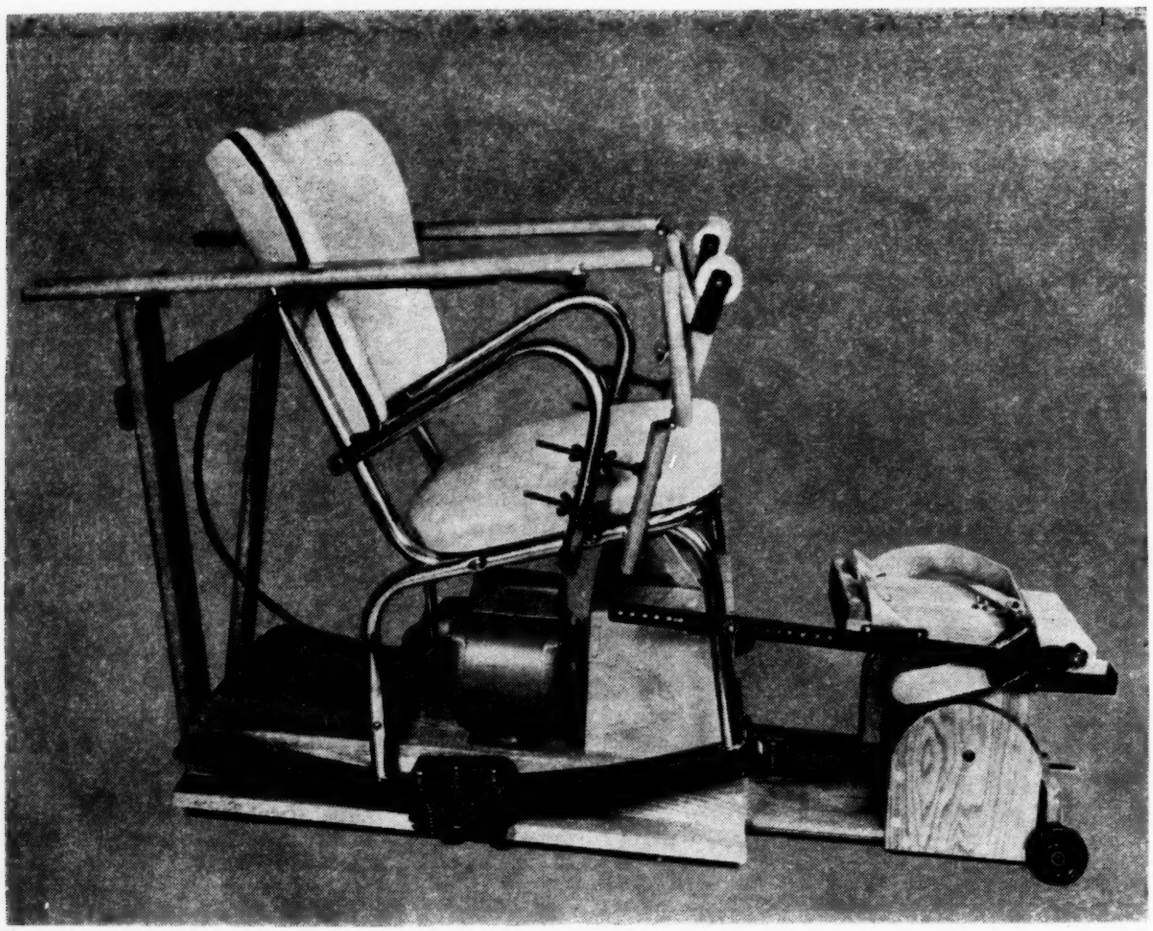


FIGURE 1.

FIGURE 1. This chair, designed primarily for patients with Parkinson's disease, may be adjusted to fit a patient of any size. The arms can be extended, and the back can be raised. The foot rest is extendable by means of a hand screw on the foot plate. The chair allows the patient to obtain passive flexion and extension of the muscles about the wrists, elbows, shoulders, hips, knee, and ankle joints. The patient puts his feet in the straps on the foot plates and grasps the handles at each side on the chair arm. His joints will be passively exercised when the switch is on, so that both the flexors and extensors will be stretched a bit. Both the rate and the extent to which the motor moves the chair are adjustable; most patients prefer a rate of about 16 to 18 times a minute. A few find this too rapid. None we have met wish to go faster, but this is possible.

Patients usually like this exercise for 15 to 20 minutes; beyond this most patients get tired. This exercise can be done 3 or 4 times a day. A few prefer it more frequently. Some are so relaxed at the end of a 15-minute period that they doze off. They even seem able to sleep briefly while the chair is in action.

The motor control switch is on the right arm of the chair. Any patient can turn it on or off at will. Adjustable wheels enable the chair to be moved about different parts of the house. Details can be obtained from the Electric Rocking Chair Company, Lowell, Mass. The chair is sold at cost; original finances came from the Parkinson's Fund, Massachusetts General Hospital.

FIGURE 2. The work sheet, which can be modified by any group or physician working with patients with Parkinson's disease, is designed to give an approximate evaluation of the various medical and neurological findings at the time the patient first reports for rehabilitation. Numerical subjective scoring is included on the same sheet. Patients and relatives are asked to estimate the degree of difficulty the patients' disease is causing them in the 10 items found on the *subjective,* or left, side of the sheet, compared to a previous normal, which they had before the disease appeared. While a numerical scoring system of 5, 3, or any number of points can be used, the ordinary person is best able to handle percentages. If he is nearly normal, he obviously will not be presenting himself for rehabilitation, so 100 percent scores, representing normal, on the items would be rare. Some patients would regard their difficulties as so slight that they nearly approximate a 90 or 85 percent score. These can be marked by a cross in the appropriate place under these 10 items. We feel that any patient who can do any of these items himself *without requiring help,* even though he takes 3 or 4 times as long as a normal person, is at least 60 percent of normal. Those needing help are below 60 percent, and marks as low as 20 or 30 percent can be indicated here.

The item *Eating* would include all problems connected with taking food, such as cutting meat, using knives, forks, spoons, napkins, salt shakers, pouring from a pitcher, drinking from a glass, and getting the whole meal down at the table. If cutting meat was the only difficulty, the score would be around 85 percent. If totally unable to feed himself, the patient should be given a zero. The mere chewing and swallowing of the food is not being estimated here. *Retiring* consists of matters related to getting comfortable in bed, turning over in bed, getting in and out of bed, and, in general, making oneself comfortable for rest or sleep. *Indoors* includes such activities as getting in and out of chairs, getting from one room to another, taking books off shelves, turning lights on and off, and turning radio and television apparatus on and off. *Outdoors* includes all the activities of walking, getting across streets, handling oneself in traffic. *Travel* concerns getting in and out of automobiles, taxis, trains, or airplanes. We have a questionnaire we give to our patients that

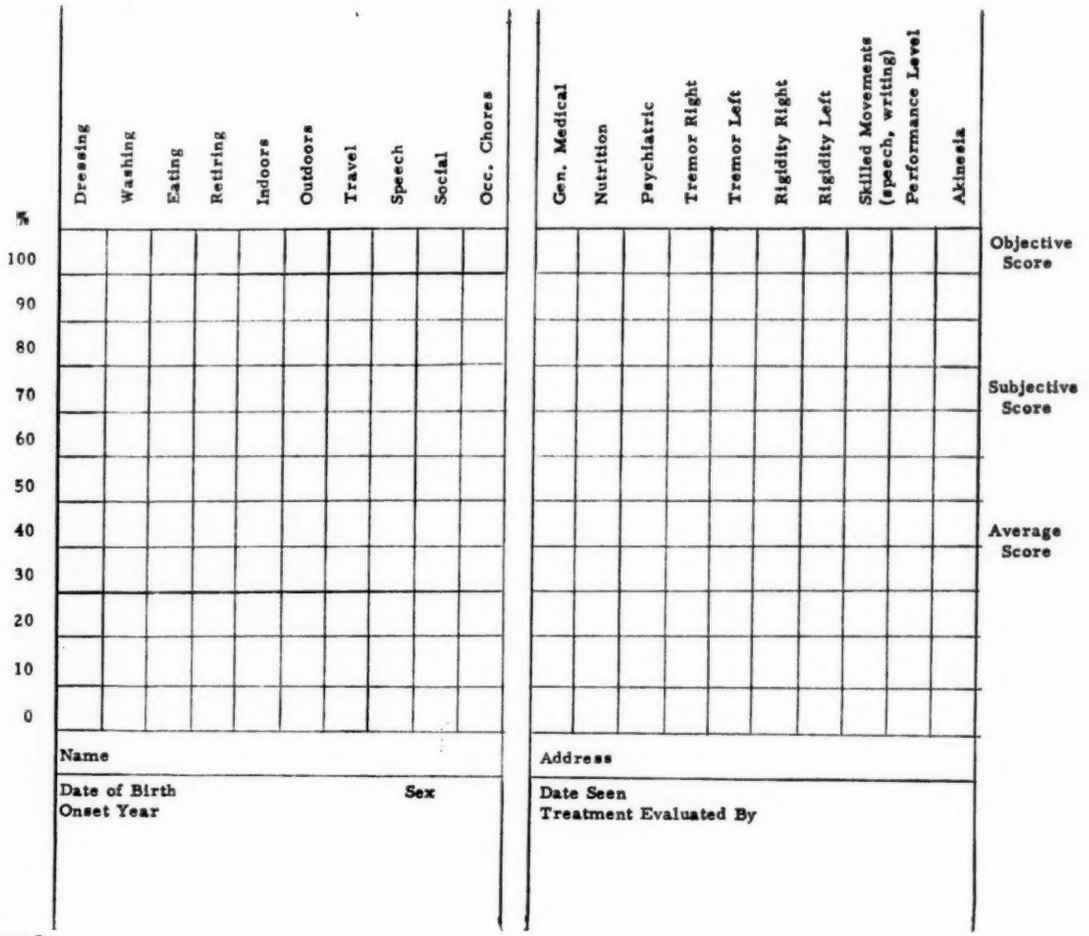


FIGURE 2.

explains much of this; copies can be obtained from the authors.

The *objective,* or right, side of this form starts with *General Medical Health.* A person with a normal cardiovascular system, no pulmonary difficulty, and no joint trouble would be scored as 100 percent, allowing for the fact that everyone in this age group has a certain degree of vascular disease. In case of frequent attacks of anginal pain due to coronary insufficiency, making normal activity quite difficult, the score would be down around 50 percent. *Nutrition* would be scored chiefly in relation to whether the patient was within his normal weight. The *Psychiatric* column would score emotional disturbances present; depression could be scored in percent value, 100 percent being no symptoms and zero the maximum amount of symptoms, as in the case of a patient with a frank, open psychosis who would have to be committed to a hospital for the insane.

Tremor and *Rigidity* are considered separately for the two sides of the body, because some patients have only one involved side or one is more involved than the other. Maximum tremor or rigidity would be scored zero and would be ++++ or +++++. Having none would be 100 percent. If there was no tremor at all in the hands or legs, but there was around the lips or in the head or jaw, a note would be made under *Tremor,* and both sides would be covered together as one unit. *Skilled Movements,* as required in writing, talking, and handling pencils or buttons, would be measured and scored by the examiner.

On the *Performance Level,* one would consider gross performance such as walking or getting out of a chair rather than skilled movements. A certain number of such movements could be observed in the course of the examination, as in the patient's ability to obey commands and to go to different places in the room. The last column is *Akinesia.* Here we wish to determine if there is any difficulty in initiating a movement, continuing a movement once started, or any problems of freezing, or becoming fixed in one position, as in a patient who cannot get out of a chair. With maximum difficulty, in which the patient can hardly do anything for himself, cannot initiate any movements, or, particularly, continue them once they are started, the score would be somewhere around 10 or 20 percent.

After 3 months' or 6 months' treatment, the patient can be re-evaluated. This evaluation could be done at monthly intervals, depending on how much time the examiner has at his disposal and how much change he is anticipating over shorter periods of time. The same sheet can be used for a number of examinations using x's for the first, circles for the second, triangles for the third, and darts for the fourth. The marks for individual examinations can be joined in the form of a graph, and one can note where there is retrogression or progression of the disease, whether there has been improvement as a result of the therapeutic program embarked on, or whether the patient has remained much the same. We consider the graphing of great value in determining how the patient is doing over a long period of time. Comparing such a graph from year to year would be of extraordinary value in determining how much progression there is. Anything of this type increases the usefulness of the therapeutic program and gives a very definite indication of how successful the program is.

On the right of the sheet is a place for the objective and the subjective scores. The two can also be averaged together, if necessary or if desirable. Items such as the date of birth and onset of the disease can be recorded below, if that is worth doing. Even in teaching hospitals, where there are an adequate staff, medical students, interns, and secretaries, it is surprisingly difficult for anyone to estimate with ordinary clinical notes how a patient is progressing over the years, let alone months. Yet this sort of record can make the patient's course abundantly clear.

cological program of therapy, when disease was first uncovered, would modify the relentless, steady progression. Here again we have no knowledge to back up any theoretical conclusions. We do not know what causes the disease to progress, nor do we know what measures can be taken to reduce the speed of this progression. The relationship of effect of therapy on speed of progression is far from clear, even when a total program of rehabilitation is undertaken from all angles. We would like to state that such a program could not hasten progression, but we cannot say even this with certainty.

5. Psychological Measures

By psychological measures, we do not mean formal psychotherapy, of the analytic type. The latter is needed in some special instances, but we mean rather a total control and management of the patient, involving his personality, his emotional problems, and his family and the inter-relationships. In the first place, it is absolutely necessary, as soon as the diagnosis has been made, to describe to the patient in simple, honest terms the type of the disease and what the future may mean. Obviously, one uses an optimistic approach. The family have to be in on this, for they must understand the disease, what kind of invalidism may develop, what therapeutic measures can be instituted, and what the future may be like.

When an elderly member of the family in his late 70's develops early parkinsonism, this is not so important. When a 50-year-old breadwinner with several children develops Parkinson's disease, he must consider what will be the economic side of his disability for the next 10 or 15 years. This is exceedingly important.

There are still, unfortunately, many physicians who feel that a patient who has this disease cannot stand the bad news of being told what he has. Since this condition, as far as we know, is completely incurable and the average life expectancy of a patient with Parkinson's disease is to somewhere in his late 60's, a man who develops the symptoms at the age of 40 years has to face about 25 years of having Parkinsonism. It is utterly futile to withhold the name of the disease, or the nature of it, from the patient for any reason; sentimental or otherwise! If the physician is unwilling or unable because of ineptitude, shyness, or some other reason, to tell the patient what he has, he should refer him then to a consultant, such as a neurologist or a neurosurgeon, who could clear up the matter of correct factual information concerning the disease.

We have been through this a number of times. In 1957 a questionnaire was sent to 300 patients asking them if they thought they should have been told as soon as their doctor knew they had the disease. We got back replies from 299 saying that they thought they should be told this information as soon as the physician was certain of it. This particular report of the desires of the patients would seem to answer any arguments that it is a proper thing to enter on a long masquerade of deception, even though the motives for this are of the highest.*

One would certainly feel that in the early stages of parkinsonism one could explain to the patient that, if he neglects the symptoms and struggles along without any therapeutic measures or efforts at rehabilitation, he might get into difficulty sooner than if he put himself vigorously into a co-operative endeavor with his doctor to try to keep himself as active as possible, using every means at his disposal. The patient must be instructed and reassured that the tremor and the masklike facies, while noticeable to strangers and others on the outside, would not in any way detract from their benevolent estimation of him. No one becomes antagonistic on seeing somebody with any type of difficulty, whether it is a broken arm in a sling, a patch over one eye, or a crutch to make walking more comfortable. Nor should one suppose that an involuntary tremor of the hand or difficulty in managing the saliva would reflect unfavorably against a patient when seen in public. This has to be repeatedly stressed, and reassurance and explanation of this must be given continually.

The family of the patient must be instructed and coached in the nature of the disease. They must know the difficulty in walking, the slowness in getting upstairs, the great difficulty in feeding oneself such as in cutting meat. These are things that are part of the disease symptom complex and not due to any unwillingness on the part of the patient. The family should also know that the patient's occasional ability, under stimulation of an emergency, to run up or down stairs or carry something heavy is characteristic of the disease and not due to a sudden desire to be normal again. A great many relatives are quite misinformed about the psychological component of parkinsonism and might feel that the patient is not trying or is deliberately making his symptoms more incapacitating in order to earn sympathy. This situation is far from the truth.

An understanding spouse is probably the most valuable asset a patient with this disease can have. Understanding children, siblings, and neighbors are also very valuable. Such helpful associates must be encouraged and informed by the physician when they ask questions about the nature of the disorder.

It is very important in the early contact with the family, friends, and the patient that the physician emphasize the uncertainty of the future. Some patients unfortunately will rapidly develop symptoms and progress to a state of invalidism in 2 or 3 years. Why they do this no one

*For 5 years we have given to each patient a 5-page summary about this disease in nonmedical language. Copies may be obtained from the authors (Massachusetts General Hospital, Boston 14, Mass.).

A Comment on

The Doctor and the Patient With Parkinson's Disease

"IN THE CONSERVATIVE MANAGEMENT of the parkinsonian patient the single most important factor is the sincere interest and patience of the attending physician. Patients with parkinsonism may suffer a prolonged, frustrating, progressive, perplexing series of symptoms and disabilities. They often become antagonistic, and, in even greater measure, their relatives become frustrated and antagonistic. I have found that in a surprisingly large number of cases these patients become embittered because of the difficulty of finding a physician with the time or interest to direct the therapeutic management of their prolonged illness. Therefore, in the medical management of any patient with parkinsonism, I would place this factor of interest and understanding on the part of the physician as more important than any of the medicinal agents which currently constitute the medical therapeutic armamentarium against parkinsonism."—*From* Parkinsonism; Its Medical and Surgical Therapy, *by Irving S. Cooper, p. 7. 1961. 239 p. Charles C Thomas, 301-327 E. Lawrence Ave., Springfield, Ill. $16.50.*

knows. This has to be faced when it occurs. It need not be emphasized, and it is certainly not the common pattern. Nor can one promise that the disease will remain stationary, that the unilateral tremor on the nondominant side, for example, in the hand, will remain only there and not spread to the other side. In general, if one has a period of a year or so to observe, one can guess as to the pattern of progression, but even here it is subject to unpredictable variations. For example, a person's incapacity may remain strictly unilateral for a period of 7 or 8 years, and then when he is in an automobile accident, for reasons not clear at all at the present time, the disease may progress rather rapidly and spread to the other side.

Equally puzzling, a patient may develop symptoms that come on rather quickly over 1½ years, and then development and progression may cease and the symptom complex remain relatively stationary for as long as 12 to 15 years, without evidence of spread. One cannot predict accurately here, but one can be optimistic and make the guess that in the majority of patients progression will be slow, even though it will be steady. A great deal should be done to encourage rehabilitation at all times. Restriction in activity by the patient, as well as neglect by relatives so that he remains alone at home for long periods of time, may have serious physiological results. We do not know whether depriving a patient with this disease of variable and interesting stimuli, visual, auditory, and tactile, week after week, and month after month, cannot produce some permanent changes in the brain cells themselves.

We do know from experiments reported recently that sensory deprivation in normal individuals can produce temporary aberrations in thinking and memory and produce hallucinations and marked confusion, as well as severe anxiety and tension. These happily are reversible when done in experimental situations. If they were perpetuated, however, day after day, in the case of an elderly patient left at home in a quiet room with no one to take him out or to encourage him in reading or listening to the radio, watching television, or taking walks, advanced deterioration might occur in his cortical brain cells so that organic destruction of the brain advances. Some day, we perhaps will know more precisely about this.

One could certainly consider it wise to keep a patient with this disease as stimulated and as actively interested in everything that is going on around him as is possible. This is included in the psychological and situational environment. He should be encouraged to go to movies, parties, or card games, watch public demonstrations such as sports, take walks with friends, and to keep up everything he possibly can without being unduly fatigued or injuring his general health.

Whether it would be possible, if one continued physiotherapy and voluntary exercises and forced a program of social contacts day after day, to modify progression in an individual case is not known. It ought to be pointed out, however, to every patient who is interested and willing to listen to his physician, that this is a possibility and that nothing would be lost by embarking on a vigorous program of normal participation in all the environmental affairs that he found both pleasant and interesting and enjoyed prior to the onset of this disease.

When we are dealing with depression and discouragement, frequently associated with this disease, we have to take more specific measures along psychiatric lines. There are some drugs such as the amphetamines and imipramine hydrochloride (Tofranil), which will help the reactive depression of the disease. Psychotherapy and group psychotherapy have been of benefit in some instances. Reassurance and broadening of the interests, mentioned previously, sometimes will help with the depression. If one can find a medical or surgical therapeutic regime that will alleviate some of the incapacity and take away some of the symptoms, frequently the depression itself will disappear. Sometimes a serious depression that deprives a patient of much activity, so that he sits, deeply depressed,

retarded, and uncommunicative in his home, has to be attacked by more vigorous methods, such as electric shock therapy. Even lobotomy has been rarely advised in such a situation. These are more drastic than the usual therapeutic devices but have to be considered in appropriate situations where simpler technics have failed.

One must not give up and one must have a broad, tolerant attitude toward the various forms of therapy in use at the present time.

6. Surgical Intervention

The use of surgery recently has been given a much more solid foundation by the work of Irving Cooper and others, who have found that a specifically placed lesion in the thalamus will remove from the patient's contralateral side both the tremor and rigidity associated with Parkinson's disease. The rigidity is the more disabling, the tremor the more disturbing, and, in patients who have tremor and rigidity of an extreme type that does not respond satisfactorily to the medicines available, one must consider placing this therapeutic lesion.

A NEW 15-PAGE PAMPHLET is available that will answer many questions asked by patients with Parkinson's disease and by their families. *Parkinson's Disease—Hope Through Research (Pub. Health Serv. Publ. no. 811),* is for sale by the U.S. Superintendent of Documents, U.S. Govt. Print. Off., Washington 25, D.C., for 15¢ ($11.25 per 100 copies).

As reported by Cooper in a number of publications, the results of his lesion-making technic on the whole are favorable. Some 70 to 80 percent of the *properly* selected patients receiving this procedure have had relief of tremor and rigidity, either complete or so nearly complete as to be satisfactory to the patients for as long as they have been followed, in some cases 7 years. There is no truth in the statement that, regardless of the surgery, the relief is only transient and the symptoms return in several months. Return of rigidity and tremor after the lesion is placed occurs only when the lesion was incorrect in position or inadequate in size. Better performance, return of weight, and loss of depression follow successful surgical operations.

Cooper has reported favorably on 1,500 cases. We have followed 110 patients through this surgery, 70 operations by Cooper and 35 by Dr. William Sweet of our own staff. The rest were by other surgeons. Seventy had good results—15 patients have 5 years behind them. There were six deaths and four serious permanent complications. Drugs or other forms of therapy cannot remotely equal the striking benefits of successful neurosurgical intervention in this disease.

A patient can be brought from 50 percent of normal to 75 percent by the best results of our five rehabilitation efforts described on previous pages. This will be greatly appreciated by all and is considered a good result. Surgery can push this all the way to 95 percent in only a few weeks. It can do this only in the ideal case, which occurs in only 1 of 20 persons who have this disorder. Another 5 or 6 percent can be helped less dramatically.

To avoid any misunderstanding of these figures we repeat:

1) Only 10 or 12 patients are suitable for surgery out of every 100 who have Parkinson's disease.
2) Of the 100, 5 are ideal.
3) Another 5 to 7 can get some benefit.
4) The remaining 88 to 90 of the 100 are not suitable, due to age or type of disease, and will not benefit or will be worse if it is done.
5) Of those who are selected for surgery there is a risk of death of 2 percent and a risk of complication of 3 percent to 4 percent.
6) Of this suitable group, 80 percent can be helped and half of them to a striking degree.

Empirically, if the benefit in loss of tremor and rigidity lasts for 3 months, we can state it will not return on the side corrected. The unrelieved side, of course, may develop more symptoms and eventually leave the patient as badly off as before the surgery. But at least he has one good side. A second operation on the other thalamus is both safe and reasonable in such a situation. It cannot be done for 6 to 12 months after the first operation without undue risk. We can therefore do surgery for only 10 percent of our patients.

In conclusion, we must regard rehabilitation as a five-point program of total mobilization of all medical resources, directed to help the unfortunate patient with Parkinson's disease. In the few suitable for surgery a sixth point is available, after adequate trial of the first five and when such patients suitable for surgery have progressed to a point where a 2 to 5 percent risk is worth taking.

We know of no more grateful group of people than those with this disorder. The comparative small gains each of the five points can produce justifies all the effort and time. There is no excuse at this time in our medical history to tell such patients that their disease is hopeless and nothing can be done and that total invalidism is a few years away. What the future holds for therapy in Parkinson's disease in general is unknown, and equally unknown is the future of each particular patient.

(Continued on page 343)

828

Growing Old; The Process of Disengagement

By: **Elaine Cumming,** Ph.D., and **William E. Henry,** Ph.D. (Foreword by Talcott Parsons)

1961. 293 p. tabs. Basic Books, Inc., 59 Fourth Ave., New York 3, N.Y. $6.75.

ORGANIZED around a social-psychological theory of aging, this report includes a portion of the findings of the Kansas City Study of Adult Life, a research project supported by the National Institute of Mental Health. Working on the theory that aging is an inevitable mutual withdrawal or disengagement, resulting in decreased interaction between the aging person and others in the social systems to which he belongs, the authors conducted a long-term study of a panel of aging people, chosen from physically healthy members of the middle and working classes; all were free from major economic worries. Major purpose of interviews was to discover how the individual related to his environment. In analyzing the quantity of data, Drs. Cumming and Henry, and their associates, sought answers to such questions as: Does retirement make a person feel "useless"; Do aging parents need ties with the younger generations of the family; and, In a culture that emphasizes youth, do the aged feel themselves a rejected minority? Attitudinal variables were analyzed to determine how the individual shifts his orientation and modifies his attitudes in order to "ready" himself for the disengagement process. The concepts and theory formulated here should provide a hypothesis for additional studies, and the possible solution to many of the problems in planning for the aged.

829

Multiple Sclerosis; Prognosis and Treatment; A Nosometric Approach

By: **Leo Alexander,** M.D., **Austin W. Berkeley,** Ph.D., and **Alene M. Alexander**

1961. 188 p. figs., tabs. Charles C Thomas, Publ., 301-327 E. Lawrence Ave., Springfield, Ill. $7.50.

CLINICAL STUDIES conducted at the Multiple Sclerosis Research Clinic of Boston State Hospital between 1948 and 1956 resulted in quantitative data on characteristics of the early course of the disease and the effects of treatment. A total of 554 patients were studied over periods varying from 1 to 8 years, the average being 3 years. Repeated neurological examinations, quantitatively scored, were made to re-evaluate the original diagnosis in the light of further findings. Diagnostic methods are outlined in detail and the course of the illness described in relation to time factors and severity of attacks. Various therapeutic approaches and their effect on individual attacks and general course of the disease are discussed, with specific directions included for treatment methods and administration of drugs. The authors have found the only treatment capable of bringing about significant improvement in patients with chronic progressive or severe stationary disability is ACTH therapy. Blood transfusion therapy has been found capable of augmenting or replacing spontaneous recovery potential of patients who failed to recover from attacks or whose spontaneous recovery was only slight. The intensive treatment regimen must always be followed by a maintenance regimen to prevent relapse. The book should be extremely helpful to the general practitioner or neurologist serving such patients. A bibliography of 132 references and an index are additional features.

830

Neurophysiology

By: **Theodore C. Ruch,** Ph.D.; **Harry D. Patton,** Ph.D., M.D.; **J. Walter Woodbury,** Ph.D.; and **Arnold L. Towe,** Ph.D. (Edited by: **Theodore C. Ruch,** Ph.D., and **John F. Fulton,** M.D.)

1961. 521 p. figs., tabs. (Reprinted from: *Medical physiology and biophysics; 18th ed. of the Howell Textbook of Physiology,* ed. by Theodore C. Ruch and John F. Fulton.) W. B. Saunders Co., W. Washington Sq., Philadelphia 5, Pa. $10.00.

IN RESPONSE to requests of those not interested in the whole field of physiology, the neurophysiological chapters of the latest edition of Howell's classic *Textbook,* dating back to 1896, have been reprinted as a separate volume. Dr. Ruch, in his Preface, states that in dealing with the higher levels of the nervous system the authors have continued to stress functional anatomy as elucidated by physiological means. This emphasis on functional anatomy should make the book useful in neuroanatomical courses, taught either separately or in conjunction with neurophysiology. A new chapter has been included on the

neurophysiology of emotion and motivation. Discussions in the parent volume on the neural control of the heart, circulation, micturition, respiration, and food and water intake have been omitted but utilize the principles presented here.

831

Parkinsonism; Its Medical and Surgical Therapy

By: **Irving S. Cooper, M.D., Ph.D., F.A.C.S.**

1961. 239 p. figs. Charles C Thomas, Publ., 301-327 E. Lawrence Ave., Springfield, Ill. $16.50.

BASED ON CLINICAL EXAMINATIONS of more than 5,000 parkinsonian patients and on the author's personal series of 1,500 basal ganglion operations for the relief of involuntary movement disorders, Dr. Cooper's book offers a comprehensive description of therapy in parkinsonism and an analysis of results following neurosurgery. More than 50 case histories, including indications and contraindications for surgery, results, and complications, illustrate the value of neurosurgery in properly selected cases. The importance of attention to intellectual, emotional, and psychologic symptoms in the disease is stressed; a multi-disciplinary approach to the rehabilitation of patients with parkinsonism is urged. Both physical and psychological gains may be obtained from well-planned rehabilitation programs.

Dr. Cooper has described in detail the surgical technics of chemothalamectomy and chemopallidectomy; the more than 250 illustrations prepared by Mary Loren and Rosemarie Spitaleri portray graphically all details of surgery and the results of basal ganglion lesions in various sites.

For Your Office Reference Shelf

A BIBLIOGRAPHY AT BEST is an awkward tool. It takes imagination and intelligence to compile one, and it requires the same traits on the part of the user. Every student and researcher is aware of the problem of locating pertinent references from the overwhelming flood of publications that have appeared in a subject field.

Cumulative Index of Hospital Literature, 1955-1959

Prepared by: **The Library of the American Hospital Association**

1961. 443 p. *(G-171)* American Hospital Association, 840 N. Lake Shore Dr., Chicago 11, Ill. $17.50.

The growing interest of hospitals and administrators in the field of rehabilitation is reflected in the enormous increase in the number of articles in hospital publications on rehabilitation subjects. The *1945-1949 Cumulative Index of Hospital Literature* indexed only 104 articles on rehabilitation, in the 1950-1954 cumulation 230 such references were listed, and in the new 1955-1959 cumulation a grand total of 983 references were identified: 160 under the heading REHABILITATION CENTERS, HOSPITALS AND DEPTS., 17 under REHABILITATION NURSING, and 806 under REHABILITATION SERVICES. The growth may be explained partly by the fact that the most recent cumulation contains some 55,000 entries against 25,000 listed in the preceding cumulation.

This increase in the number of references means that the searcher for useful references on rehabilitation must be able to identify those pertinent to his immediate interest and, specifically, to know where in the volume he will find them. He must become familiar with the idiosyncrasies of the compilers of the bibliography. The 50 references on cerebral palsy, for example, are divided among several headings in the volume. Their arbitrary assignment to these headings is not clear. Since there are direct entries under cerebral palsy, multiple sclerosis, and muscular dystrophy, but not under amputation, aphasia, arthritis, or paraplegia, one must search. In these latter cases, one finds them under the heading REHABILITATION SERVICES. The general user of *Cumulative Index of Hospital Literature* must remember that *CIHL* has been compiled primarily for the hospital administrator.

Automatic information retrieval systems, involving millions of dollars for research and equipment, have been developed in recent years (see *Business Week,* July 8, 1961, p. 46). The performance of an electronic brain is spectacular, but its success depends still, just as in the use of *CIHL* or other conventional bibliographies, on the people who prepare the references and the user who seeks the references. In both cases a tool is prepared and is used by human beings who are presumed to be imaginative and intelligent.

—The Editor.

832

Pastoral Counseling for Mental Health

By: **Samuel R. Laycock**

1961. 96 p. Paperbound. Abingdon Press, Nashville 2, Tenn. $1.00.

A MANUAL prepared under the auspices of the Canadian Mental Health Association at the request of the United Church of Canada's Marriage Guidance Council attracted wide attention in 1958; the National Council of Churches asked that Dr. Laycock prepare a similar book for the use of clergymen in the United States. It is not intended as a complete guide to the counseling process; the suggestions offered are only the basic principles involved in a wide variety of counseling situations. The clergyman's role is defined, technics of interviewing are explained, and the use of community resources recommended. Perhaps the greatest value of the manual lies in the extensive bibliographies and listings of agencies that supply information and aid. Dr. Laycock is a theologically trained psychologist, experienced in training teachers and clergy groups in Canada for many years; he has also worked with parent and community groups as leader and writer.

833

Report on the Fifteenth Congress of Scandinavian Neurologists, Copenhagen, 1960

Edited by: **H. Pakkenberg**

1961. 342 p. illus., figs., tabs. Paperbound. (*Acta Psychiatrica et Neurologica Scandinavica.* Suppl. 150, v. 36, 1961) Munksgaard, Internatl. Booksellers and Publishers, Ltd., 6, Norregade, Copenhagen K, Den.

LECTURES and discussions on apoplexy (p. 13-149), its pathogenesis, treatment, and prognosis; on epilepsy (p. 150-242), its therapy, prognosis, and social aspects; and on rehabilitation in neurology (p. 243-307), including epilepsy, were presented at the 3-day meeting of the Scandinavian Neurological Association in September, 1960. Contents of the section on rehabilitation are: Organization of neurological rehabilitation, Tore Broman.—On the organization of neurological rehabilitation; some remarks on rehabilitation in hemiplegia, Ake Stenram.—Rehabilitation in neurology (excluding epilepsy); social-vocational aspects, A. Chr. Gogstad.—Notes on rehabilitation of the brain-injured, Eero Hillbom.—Rehabilitation in neurology, Odd Lindahl.—Rehabilitation of patients with spinal cord injuries, Ole Remvig.—Technical aid in rehabilitation of neurological patients, Olle Höök.—Rehabilitation of paralysis in both arms, Ake Stenram.—Self-help devices for a right-side hemiplegic housekeeper, Lone Gjørup.—On the need for rehabilitation treatment in cases of brain lesion, Eero Hillbom.

834

Subnormal Personalities; Their Clinical Investigation and Assessment

By: **C. J. C. Earl,** F.R.C.P., D.P.M., F.B.Ps.S. (with additional material by H. C. Gunzburg, M.A., Ph.D., F.B.Ps.S.)

1961. 338 p. tabs. Williams and Wilkins Co., 428 E. Preston St., Baltimore 2, Md. $7.00.

DR. EARL, late medical superintendent of Monyhull Hospital, Birmingham, England, finished all but the last chapter and the appendixes of this book before his death. Dr. Gunzburg, who had access to all Dr. Earl's manuscripts and case material, worked closely with him for some years. The book is based on Dr. Earl's work at the Hospital and, particularly, with the educationally subnormal boys of the Residential Special School, then a part of the hospital. His concern was with the clinical assessment of the individual and those aspects of personality useful in predicting potentialities. Chapters cover the problem of personality and the concept of "mental deficiency," theories concerning the subnormal organism, sensorimotor deficits, nine personality aspects, subnormal language, and treatment and training of the adult subnormal. Appendixes contain chapters on clinical mental testing (with brief summaries of tests suitable for use by investigators not formally trained in psychology), a detailed description of Dr. Earl's Moron Battery (see Dr. Gunzburg's article annotated in *Rehab. Lit.,* Sept., 1959, #730), and six case histories illustrating the effect of formal psychotherapy and of institutional treatment.

The December Issue

Featured in December as Article of the Month will be "A Concept of Rehabilitation," by Herbert S. Talbot, M.D. Dr. Talbot is chief of urology at the Veterans Administration Hospital, West Roxbury, Mass., and is chairman of the World Committee on Spinal Paraplegia, of the International Society for Rehabilitation of the Disabled.

Digests of the Month

Journal articles, chapters of books, research reports, and other current publications have been selected for digest in this section because of their significance and possible interest to readers in the various professional disciplines. Authors' and publishers' addresses are given when available for the convenience of the reader should he desire to obtain the complete article or publication. The editor will be most receptive to suggestions as to new publications warranting this special attention in Digests of the Month.

835

Activities in Aging of the Department of Health, Education, and Welfare

By: **Wilbur J. Cohen,** Assistant Secretary of Health, Education, and Welfare. A statement read before the Senate Special Committee on Aging, Subcommittee on Federal and State Activities, U.S. Senate, Wednesday, August 23, 1961. (38 p. Mimeo.)

THE ROLE of the Department of Health, Education, and Welfare in the field of aging is constantly developing. Its growth is revealed in that over two thirds of the $16 billion administered by the federal government in services and benefits for older people last year was paid through HEW programs. Costs projected for 1965 of programs existing in 1960 totaled $22 billion, HEW programs accounting for $14½ billion of this. With the new administration, legislative activity has outdated the projected figures—the Old-Age, Survivors and Disability Insurance program projected cost has been raised from $12.9 to $13.9 billion, with several other HEW programs also receiving increases.

Basic Needs of Older People

We at HEW have found it essential to base our programs' development on an understanding of the nature of people, their fundamental needs, and conditions enabling them to function as healthy, productive individuals.

The *need for security* is the first of five categories covering needs of all people, from infancy to old age. We need security from bodily harm, hunger and want, long, disabling illness, and fear of lack of shelter, friends, and care in our old age. Your Committee readily understands the feelings of the millions of older people, who feel their security threatened on these fronts.

Also basic is the *need for activity and participation*—the opportunity to be creative and to improve the environment and our way of life. All too often the older, retired person finds opportunity for activity restricted or cut off; he is without purpose and the incentive to maintain physical health and mental alertness. We know positively that many of our 3 million severely handicapped older people (nearly 500,000 in mental hospitals, nursing homes, and other institutions) have lapsed into dependency and helplessness because we have provided them no active roles or place.

All societies recognize people's *need for recognition and individuality*—to develop their capacity as fully as possible, to function as independent, self-sufficient individuals, and to enjoy the recognition received. Our society probably reveres most highly the value attached to ambition, self-reliance, and individuality. Evidence indicates that a major cause of dissatisfaction among older people is the denial of opportunity to maintain these qualities, a particular threat being the inability to retain independence of action, income, and decision-making.

Throughout life a *need for response and relatedness* is also felt. In the later years this need is intensified when children have departed from the home, husband or wife and friends have died, and confining illness or infirmity causes immobility.

Most, if not all, people must feel a purpose in their lives and the society in which they live—there is a *need for values.* In older people, often separated from family, work, friends, and even the community itself, many feel disoriented and alienated generally, with no point of reference or meaning to their lives.

Throughout life the success with which a person satisfies these needs is determined by his characteristics and circumstances and how the culture or society offers opportunity to meet the needs. Significant failure in meeting one or more drives is apt to result in poor adjustment, unhappiness and embitterment, delinquency, mental illness, or social dependence. Problems older people increasingly reveal to your Committee and all of us arise mostly because traditional ways of meeting their needs are disrupted. We all are challenged to search for and devise new methods, guarantees, and living patterns to make old age secure, meaningful, rewarding, healthy, and worth being reached.

Health Programs

In the last few months significant progress has been made along the front of ill health, the threat of acute or chronic illness in later years, and financing cost of such illness. We hope the proposal for Community Health Services and Facilities, passed in the House (H.R. 4998) and now pending in the Senate Committee on Labor and

Public Welfare (S. 1071), will be enacted this year.* It will provide construction grants for nursing homes; stimulatory grants to the states to improve health services outside the hospital, and hospital research grants.

A few specific examples of community health services these grants to the states would provide are:

1) Improvement of services and operations in nursing homes, including establishment and enforcement of safety and health care standards; technical assistance and consultation to nursing home operators to better the scope and quality of services, policies of patient admission, rehabilitation, and discharge, and methods of nursing home administration; and provision of training courses for nursing home operators and staff.

2) Establishment and improvement of home health care services, such as home nursing services, homemaker services, physical and occupational therapy services, to make available high quality health care services for the aged and chronically ill in their homes, thus reducing need for costlier institutional type care when not indicated.

3) Establishment and operation of community health information and referral centers to aid patients and professional personnel secure the most effective health services.

4) Establishment and improvement of outpatient diagnostic services to encourage early diagnosis of illness, when treatment can be most effective in preventing complications and disability.

All these envisioned programs and facilities will require trained personnel. Personnel shortages in the health field are well known. Modern medical and dental schools and teaching hospitals are expensive. Medical and dental school tuition is high and little scholarship aid is available.

The administration has recommended:

An immediate program of grants to help in planning new medical and dental schools and to find ways of improving education;

A 10-year program of matching grants for construction, expansion, and restoration of medical and dental schools: $25 million in the first year and $75 million annually thereafter;

A program of federal scholarships for medical and dental students and cost-of-education grants to participating institutions.

The above were embodied in legislation (S. 1072 and H.R. 4999) introduced in February, and hearings have been held before the Senate Committee on Labor and Public Welfare.

HEW recently created a Division of Chronic Diseases of the Public Health Service and in it a Long Term Illness Program, taking over activities formerly handled by Special Health Services, which had given consultative services primarily. Progress in past years has been disheartenningly slow, since little financial assistance for demonstration projects could be given. The President has requested $2.6 million more in operating funds for fiscal year 1962, for the development of 60 to 70 demonstration programs over the country aiming at providing preventive services, home health services, and restorative services for chronic illness and health care of the aged. If funds are appropriated, the projects will give states and communities the experience necessary to implement the much larger program envisaged in the Community Health Services and Facilities proposal. HEW thus, with the new programs, will be able to carry out its responsibility regarding recommendations made at the White House Conference on Aging.

* Enacted by Congress and signed as Public Law 87-395 by Pres. Kennedy on Oct. 5. 1961.—*Editor.*

Vocational Rehabilitation

Longer life span brings with it greater incidence of physical and mental disabilities because of longer exposure to insidious disease processes and environmental hazards. In 1945, some 8,300 of the persons rehabilitated and returned to work were in middle years or older. This year, the number will reach 25,000, or 30 percent of the total. More workers are being disabled each year than are being rehabilitated. Major obstacles to reversing this trend are: lack of knowledge of extent of rehabilitation feasible in certain severe disabilities, including senile deterioration; insufficient knowledge of rehabilitation procedures; nation-wide lack of diagnostic and treatment facilities; shortage of trained physical and occupational therapists, rehabilitation counselors and nurses, and ancillary personnel; and the general tendency to reject the older worker, particularly the handicapped older worker.

Rehabilitation of older clients has required new counseling technics, procedures, appliances, placement technics, and personnel acquainted with their nature. The Office of Vocational Rehabilitation has sought to encourage development along these lines and favorable attitudes toward older persons and has sponsored conferences and institutes. Just 2 months ago the OVR appointed a full-time consultant in aging to work with state rehabilitation agencies. More than 12 percent of the 500 grants made by OVR have been in the field of aging. Demonstration projects receiving support cover many aspects. Three approved recently will provide rehabilitation evaluation of recipients of disability insurance benefits, mostly over age 50. Promising results are coming from experimental projects in training personnel of nursing homes and in restoring older people with hitherto baffling impairments. In one state, a demonstration with patients in a county infirmary has resulted in physical therapists being added in several other county institutions.

The White House Conference recommendations are widely disseminated among rehabilitation workers, community leaders, and state officials. The Randolph-Sheppard Act is drawing attention to the rehabilitation and employ-

ment of the blind. Some 85 percent of the 350,000 blind in the United States are 45 years of age and over.

We have made some solid progress, finding directions and getting programs into action, in providing income security, health facilities, and rehabilitation for the aged. We have explored in other areas and are setting guidelines and proposing action.

The first National Conference on Aging in 1950 led to nation-wide recognition of the need for broad scale action. The White House Conference on Aging and the work of the Senate Subcommittee on Problems of the Aged and Aging and your Special Committee on Aging are providing a blueprint for action. Projects and programs are pointing the way. We in HEW are ready to go; the states are ready to move and some are moving. We must encourage and support continuing research and program evaluation so that longer life may be recognized as an asset to the nation and our older people as one of our greatest national resources.

836

The Value of Special Care and Training

By: **Grace E. Woods, M.D., D.P.H., D.C.H.** *(Deputy Medical Superintendent, Hortham Hospital, Bristol, Eng.)*

In: *Mentally Subnormal Spastics; Addresses Given at a Conference Held in London, December, 1960*, p. 18-26.

1961. 30 p. Illus. Issued by the British Council for the Welfare of Spastics, 13 Suffolk St., Haymarket, London, S.W.1, England. 4s 6d (81¢).

CARE AND TRAINING of ineducable spastics has not been discussed as much as that of educables. For the ineducables the definition of cerebral palsy as a qualitative defect of movement due to nonprogressive cerebral damage in the early years of life cannot be as easily used as it can for the educable. Many ineducables are late in walking due to mental defect, often out of proportion to delay in feeding themselves and in other activities. Many are abnormally clumsy, with bizarre movements. All the 157 ineducables included in this paper have some abnormality of muscle tone—spasticity, fluctuation in tone, or a rigidity or plasticity.

I have found the aetiology of ineducables with cerebral palsy to differ somewhat from the educable's. Cases of small premature babies are fewer than in the educable (28% compared to 10%), but there is more of difficult, full-time births (41%-38%), followed by severe asphyxia and signs of brain damage. Class D asphyxia has resulted in later bilateral hemiplegia. Incidence of associated congenital defects or a history of inherited illness is higher in the ineducables (30%-11%). Small birth weights and abnormal births are more frequent in those with severe motor defect requiring facilities of a special cerebral palsy school (many are athetoids).

Educable spastics have a good brain damaged, though there are specific defects. With the genuinely ineducable, there is defect of the total brain.

More spastics are found among ineducables than educables (53% compared to 36%), hemiplegics are fewer (12%-36%), as are athetoids (8%-14%), but mixed types—spasticity with athetosis, rigidities, and ataxias—are commoner in the ineducables (27%-14%).

I have placed the 157 ineducables in the following intellectual categories:

A	High-grade defective (only 1 unable to walk)	24
B	Medium-grade defective (Occupation Centre or hospital school)	27
	Rudolf Steiner or other special centre	8
C	Special care unit	
	Day	18
	Residential	15
	At home (only 1 able to walk)	31
D	Untrainable	16
	Dead	18
		157

To put IQ 54 in the same class as IQ 24 is as wrong as to put IQ 120 with IQ 90. I include in the high-grade patients those with IQ's between 45 and 60.

The *A stream* has several children who can follow at a later age the type of curriculum offered in E.S.N. [educationally subnormal] schools. This group can be kept separate from the rest in a large occupation centre and in a hospital and be given a much more normal life. At Hortham Hospital, 40 of these are in a hostel, treated as though at a residential school, going out to church, shopping, and for other outings and being taught the three R's when over age 10 or 12. Many later earn their livings.

My series has comparatively few cases of cerebral palsy in the A stream, reflecting the cleavage between a good brain damaged and a gross dissolution of brain function. There are many hemiplegics, declared ineducable in school, and athetoids, frequently with signs of cortical damage. Often motor defect is slight: most can walk.

Our special hostel has only three with cerebral palsy. In the A stream, most of the cerebral palsied are at home, attending the Occupation Centre. The more advanced classes of such centres should have places for handicapped children, including wheel chair cases. A few in this stream are at Rudolf Steiner Schools, in centres such as the National Spastics Society's Assessment Centre at Hawksworth Hall, and some have home teachers.

B stream children have IQ's around 35 to 45 and are similar to most of those at an occupation centre or at a mental deficiency hospital—they are trainable, can join in music, games, sense training, and simple crafts, and will grow up to scrub floors, clean taps, and do simple

factory work. Occupation centres and hospital schools should provide for them, which entails providing wheel chairs and special chairs for nonwalkers. Many have at least one good hand and can be active in this less demanding training.

The *D stream* has some hopeless cases needing total nursing care. The children do not try to co-operate in physiotherapy. The 18 deaths in the series are mostly from the D stream.

C stream children have severe mental subnormality and movement defect; many have other handicaps. The series has 66 in this stream. They recognize Father and the other children; they know dinner time. Parents feel they can be brought on a little. Each is a family tragedy and a terrible burden, but parents are not resigned to hospital placement or the children's remaining in the home unless something is done to bring out the potential.

Special care units, day or residential, are needed for the C stream. Our aim is not high. We want the children to walk if possible, to talk, to feed and dress themselves, to be clean and dry, and later in life to be able to do some simple work. We try to prevent gross deformity. A small unit is needed, where children are dressed daily, put in a play pen or on the floor to play, and sometimes set up with toys in special chairs. Simple play and manipulation are stressed with rattles, beads, things that move, television, music, and outings in the pram. Learning to walk is more important for them than for the educable. Their lives will be institutional, possibly in a hostel, and, if they walk, the total care required is less and later life will be brighter.

These children are benefiting from physiotherapy along the Bobaths' lines. Their drive to walk is not the same as the educables. We do not worry so much about the carry-over of spasticity into the arms with use of appliances. Parallel bars, walking aids, plasters to correct abnormal patterns, and occasionally calipers are used. There seems to be a critical period of maturation regarding walking in these children, and if the opportunity cannot be grasped getting them to learn later is difficult. These children have bilateral hemiplegia, hemiplegia, or rigidity and are often not so stiff as educable spastics.

These ataxic, rigid, plastic children sometimes develop almost toneless feet and legs. Eventually they stand and try to walk with marked eversion and pes planus, with the medial malleoli nearly on the ground. Reinforced boots, shoe platforms, plasters, or calipers are greatly needed.

A general chatter encourages speech. Intimate, quiet conversation with the children encourages understanding and the learning of simple words. A speech therapist works in a special little playroom. Very few children seem to have gross dysarthria, as few are athetoids. Since, in them, lack of speech is caused by fundamental mental defect and lack of understanding, speech and simple understanding are brought out in play and with some music and movement. A few of the children go to hospital school, where organized play is stressed in the early years.

Many parents of C stream children want day provision and there is a need for day centres, but more and more are asking for residential care. In hospital provision must be made for frequent visiting. Many parents take their children for a ride or home to tea and are encouraged to have them home for a week or two at holidays and in the summer. They can regard the placement much as resident school, and other children feel their sibling has merely gone away to school.

In residential care, I personally prefer a ward in a mental deficiency hospital for these children, rather than a separate home in a large house, for there is continuous medical care and immediate hospital provision. Experienced staff are more readily available. There is also a pool of medium-grade patients who love looking after children. The children can be graded in a larger institution and can have a more effective school with a trained school staff. Children can stay on there into adult life.

(Continued from page 336)

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Abstracts of Current Literature

This abstracting section, together with other numbered references indexed in this issue, serves as a supplement to the reference book Rehabilitation Literature 1950-1955, *compiled by Graham and Mullen and published in 1956 by the Blakiston Division of McGraw-Hill Book Company, New York. An author index will be found on the last page of the issue.*

ACCIDENTS—PREVENTION

837. Taylor, John E. *(State Dept. of Education, Salem, Ore.)*

Safety education for children with auditory handicaps. *Exceptional Children.* Sept., 1961. 28:1:53-55.

The third article in a series discussing adequate programs of safety education for children with various handicapping conditions (see *Rehab. Lit.*, May, 1961, #323, and June, 1961, #485, for first two articles). Through specific instructions for parents of deaf children and special technics of instruction and special equipment used at school, deaf children can be taught to understand and cope with hazards in their environment.

AMPUTATION—EQUIPMENT—RESEARCH

838. National Academy of Sciences-National Research Council. Committee on Prosthetics Research and Development *(2101 Constitution Ave., N.W., Washington 25, D.C.)*

Final summary report, APRL-Sierra child-size hand, size 1, model A, prepared by the Subcommittee on Child Prosthetics Problems for the. . . . Washington, D.C., The Academy, 1961. 12 p. figs. Mimeo.

Demands of parents and children for a functional device with a more natural appearance led to the development of the APRL-Sierra Child-Size Model A Hand, closely resembling the normal hand in size, shape, and coloring. Available data indicate children and parents consider the device very satisfactory. The hand consists of a monocoque hand shell of cast aluminum, articulated index and middle fingers, a "two-position" thumb, and nonarticulated but flexible ring and little fingers. A voluntary-opening type of mechanism is housed within the hand shell and the entire unit is covered with a thin plastic glove that can be replaced when necessary. Construction of the hand is described in detail; maintenance problems, specifications, and indications and contraindications for prescription are discussed.

APHASIA

839. Doehring, Donald G. *(Institute of Psychiatric Research, Indiana Univ. Med. Center, 1100 W. Michigan St., Indianapolis 7, Ind.)*

Language disorders in brain-damaged patients, by Donald G. Doehring and Ralph M. Reitan. *Arch. Neurol.* Sept., 1961. 5:3:294-299.

A comparison of brain-damaged patients with right or left homonymous visual field defects, brain-damaged patients without visual field defects, and nonbrain-damaged patients, used as a control group, was made to determine incidence of several types of language deficit, construction dyspraxia, and right-left dislocation. Findings indicate that the probability of occurrence of deficits of language functioning appears to be greatly increased if right homonymous visual field defects are present. The relatively high incidence of right-left disorientation in this group, as compared with the other groups studied, suggests that this aspect of spatial orientation is intimately related to integrity of language functioning. The one symptom that did occur with high frequency in the group with left homonymous visual field defects was construction dyspraxia.

APHASIA—PSYCHOLOGICAL TESTS

840. Jones, Lyle V. *(Psychometric Laboratory, Univ. of North Carolina, Chapel Hill, N.C.)*

Dimensions of language performance in aphasia, by Lyle V. Jones and Joseph M. Wepman. *J. Speech and Hear. Research.* Sept., 1961. 4:3:220-232.

In same issue: Comment on "Dimensions of language performance in aphasia" (Letters to the editor), Hildred Schuell and James J. Jenkins. p. 295-299.

In a collaborative research project of the Psychometric Laboratory, University of North Carolina, and the University of Chicago Speech and Language Clinic, results, based on test performance of 168 aphasic patients from 19 hospitals and clinics, argue against the hypothesis that language disturbance after brain damage may be viewed as a unitary, general disorder. The finding of relatively distinct interpretable factors of aphasic test performance strongly suggests that variables corresponding to the factors should be noted explicitly when testing for aphasia. Only by distinguishing performance on each of the abilities reflected by the factors can one learn the relative strengths and weaknesses of the aphasic's language performance. Results of this investigation are in "sharp contrast" to those of Schuell and Jenkins, reported in a 1959 article (see bibliography reference).

Drs. Schuell and Jenkins, in their comment on the above study, suggest that Drs. Jones and Wepman have misinterpreted findings of the 1959 report. The letter notes that the 2 studies actually complement each other, providing a comprehensive description of aphasic performance. Conclusions of the Schuell-Jenkins study—that classic divisions of aphasia into sensory and motor dichotomies and isolated pure defects are in error—are not in conflict with the theory of a general dimension of language deficit present in aphasia.

ARTHRITIS—DIAGNOSIS

841. Davison, Selvan *(6 E. 86th St., New York, N.Y.)*

All that pains is not arthritis. *Phys. Therapy Rev.* Sept., 1961. 41:9:636-642.

Reprinted from: *N.Y. State J. Med.* May 1, 1961. 61:1576-1582.

Pain originating apparently in the musculoskeletal system is often diagnosed as "arthritis"; careful evaluation will frequently unearth the true pathology. Dr. Davison includes 25 case histories, with the initial and final diagnoses; cases are roughly divided into several categories —neoplasms, circulatory, endocrine, neurologic, and gastrointestinal disorders, and miscellaneous. Such conditions often produce pain simulating that of the musculoskeletal system; a detailed history and careful physical examination can result in the proper remedial measures or cessation of unnecessary treatment and expense.

ASTHMA

842. Dubo, Sara *(Hawthorn Center, Northville, Mich.)*

A study of relationships between family situation, bronchial asthma, and personal adjustment in children, by Sara Dubo (and others). *J. Pediatrics.* Sept., 1961. 59:3:402-414.

An unselected group of 71 asthmatic children and their parents were studied in the belief that positive relationships might be revealed between the asthma situation and family situation and between level of disturbance in the children's personalities and/or behavior and level of disturbance in family relationships and care and handling. Clinical and statistical data on patient characteristics, response to treatment, and psychiatric findings are included. It has been concluded that, in the area of severity of asthma and response to treatment, no relationships with the family situation were demonstrable. However, close relationships between family situation and the child's adjustment were consistently observed. Patients' use of asthma for secondary gains was observed to a significant degree only in those whose basic needs had been unmet or partially gratified.

BRAIN INJURIES

843. Clemmens, Raymond L. *(Child Evaluation Clinic, Univ. of Maryland School of Medicine, Baltimore, Md.)*

Minimal brain damage in children. *Children.* Sept.-Oct., 1961. 8:5:179-183.

Of 525 children evaluated at the diagnostic clinic for handicapped children, operated by the University of Maryland and the Maryland State Department of Health, a surprisingly high incidence (19% of the total group) of minimal brain damage without intellectual subnormality was discovered. Dr. Clemmens discusses difficulties in diagnosing this type of neurological deficit, the disturbances it causes, characteristics of the impairment, and the interdisciplinary approach to management and education of children with the symptoms described here.

BRAIN INJURIES—DIAGNOSIS

844. Beck, Harry S. *(Educational Clinic, Iowa State Teachers Coll., Cedar Falls, Iowa)*

Detecting psychological symptoms of brain injury. *Exceptional Children.* Sept., 1961. 28:1:57-62.

A review of the literature on brain-injured children yielded a total of 43 symptoms ascribed to such children by various writers; although no two lists of symptoms agreed, the majority of writers were fairly well agreed on 15 categories. Implications of the findings in regard to psychological testing are discussed. The article is primarily concerned with effects of brain injury in children showing no gross muscular involvements such as certain cerebral palsied children. Most tests are lacking in statistical validity as predictors or indicators of brain injury; the major problem in differential diagnosis appears to lie in the ability, or lack of ability, of tests to distinguish between organic brain damage and emotional disturbances.

BRAIN INJURIES—ETIOLOGY

845. Experimental studies of cerebral birth injury. *Brit. Med. J.* Sept. 9, 1961. 5253:693-694.

An editorial pointing out the need for continued clinical experimentation to determine whether the magnitude of brain damage in cerebral palsied children is proportional to the degree of anoxia or other stress, or whether a threshold exists, the level of which is determined by genetic or environmental factors. It is noted that association between prematurity and cerebral palsy, when not due to severe jaundice of the newborn, may partly depend upon the greater susceptibility of these infants to anoxia, but thus far it has not been possible to pinpoint a single factor such as this. 24 references.

CEREBRAL PALSY

See 836; 880.

CEREBRAL PALSY—MENTAL HYGIENE

846. Watson, J. H. *(Prested Hall, Feering, Colchester, Essex, Eng.)*

Immaturity in adult spastics. *Med. World.* Aug., 1961. 95:2:129-131.

At Prested Hall, a residential center for adults with cerebral palsy, the warden regards only one of the 47 residents as an emotionally mature person. Relations with staff members are on an adult-child level; one group lacks the minimum of assurance in making decisions, even on the elementary level. Another group enjoys being decisive at the elementary level but even this group can become confused and disturbed when the decision relates to something new. Their emotional dependence upon one another is considerable and a thwarting of the will in small matters can disturb them for days. The writer has not observed the deep sense of frustration in residents that is often reported in the literature as typical of the cerebral palsied (see the quote, this issue of *Rehab. Lit.*, p. 356). For a description of the center, see *Rehab. Lit.*, Apr., 1957, #444.

CEREBRAL PALSY—SPEECH CORRECTION

847. Irwin, Orvis C. *(Institute of Logopedics, 2400 Jardine Dr., Wichita 19, Kan.)*

Comparison of articulation scores of children with cerebral palsy and mentally retarded children. *Cerebral Palsy Rev.* July-Aug., 1961. 22:4:10-11.

In same issue: Standardization of a test of final double reversed consonant blends for use with children with cerebral palsy, Orvis C. Irwin. p. 12-14.

Comparison of the ability of mentally retarded children and of the cerebral palsied to articulate 10 difficult

consonant sounds revealed the retarded group did better, to a significant degree; this result was similar in groups with IQ's ranging from 25 to 50 and from 51 to 80. The experimental evidence appears to indicate cerebral palsy in addition to mental retardation may be a real factor in articulation difficulties. Children with cerebral palsy with IQ's in the normal range (91-110) do no better than retarded children with IQ range of 51-80. The problem of quantifying the oral paralytic factor to faulty articulation needs further investigation.

The second article reports research to standardize Templin's final reversed consonant blend test on a sample of children with cerebral palsy. Six criteria used for standardization are discussed; of these, 5 were adequately met, indicating the test's usefulness with the cerebral palsied.

CEREBRAL PALSY—SURVEYS—CALIFORNIA

848. Mills, Michael A.

Facilities and programs for the mildly retarded, severely involved cerebral palsied in the city and county of San Francisco. *Cerebral Palsy Rev.* July-Aug., 1961. 22:4: 5-9, 14-16.

This report of an 8-week research project, supported by Sonoma State Hospital and the Coro Foundation, a nonprofit public trust that provides internships in public affairs, includes 9 detailed case histories of persons most nearly typifying problems that the mentally retarded cerebral palsied present to public and voluntary agency administrators. An attempt was made to evaluate the weaknesses and strength of current programs serving such persons. Agencies with which they had contact were checked to learn what services had been provided, any limiting factors preventing the provision of additional services, special problems the group posed, and improvements in programing the agency felt to be necessary. Facilities for diagnosis, care, and training of the cerebral palsied in the San Francisco area are described briefly; recommendations for the possible provision of permanent placement of severely handicapped cerebral palsied are suggested.

CEREBRAL THROMBOSIS

849. Policoff, Leonard D. *(Albany Med. Center Hosp., Albany 8, N.Y.)*

The management of the patient with cerebral infarction. *Arch. Phys. Med. and Rehab.* Aug., 1961. 42:8:579-583.

Dr. Policoff's clinical experience leads him to believe that prognosis for functional recovery from a cerebrovascular accident with motor paresis is less dependent upon extent of neurologic involvement than upon the type and severity of the disease process present in the brain tissue. Common complications to be considered in planning management of the patient are discussed. Basic principles of a rehabilitation program are outlined; major gains which can be anticipated occur in the first 6 months of treatment but further gains in functional capacity may be anticipated for a year and a half to 2 years following onset of the initial lesion.

This paper was presented at a regional seminar sponsored by the American Rehabilitation Foundation in April, 1960, at the State University of New York School of Medicine, Downstate Medical Center, Brooklyn.

CHILDREN—GROWTH AND DEVELOPMENT

850. Mitchell, Ross G. *(Dept. of Child Health, Univ. of St. Andrews, Dundee, Scot.)*

The growth and motor development of children with cerebral palsy. *Cerebral Palsy Rev.* July-Aug., 1961. 22: 4:3-4, 17-19.

Data from a survey of all cerebral palsied persons under the age of 21 in Eastern Scotland (Dundee and the counties of Perth, Angus, and Kinross) are summarized and discussed. The value of the observations lies in the fact that patients were not a selected group and had not been treated by any special method to improve growth and nutrition or to accelerate motor development. The group was significantly below normal standards in all body measurements recorded except body weight, in which the difference was only on the borderline of significance. Deviations from normal were greatest in children with spastic tetraplegia. Motor development was retarded in all forms of cerebral palsy, but especially in spastic tetraplegia. Dr. Mitchell contributed 8 of the 20 chapters in the recent book reporting the study findings in detail (see *Rehab. Lit.*, Sept., 1961, #665).

CHILDREN (DEPENDENT)

851. Weiner, Oscar D. *(Children's Center of New Haven, 1400 Whitney Ave., Hamden 17, Conn.)*

Found: a home for Suzie. *Child Welfare.* Sept., 1961. 40:7:19-20, 23.

The right type of publicity, carefully planned, can produce successful results in finding boarding homes for the "hard to place" child with physical handicaps or psychological problems. The writer outlines the steps taken in the case of a girl with the hereditary skin disorder epidermolysis bullosa. Even the best publicity can lead to poor public relations, however, if the agency fails to prepare itself to meet the response to publicity.

CHRONIC DISEASE—HAWAII

852. Hawaii. Legislative Reference Bureau

Care of the chronically ill and disabled aged, by Mildred D. Kosaki. Honolulu, The Bureau, 1961. 44 p. tabs. *(Rep. no. 7, 1961)* Mimeo.

Prepared at the request of the House Committee on Youth and General Welfare of the First State Legislature, the report considers the general problems of physical and mental health, from the public health standpoint, and reviews various old age program approaches on the U.S. mainland and the findings of a survey of publicly supported facilities serving the chronically ill aged in Hawaii. Data are included on health level of persons 65 years of age or older, number receiving old age assistance, and the needs for services, as expressed by a selected sample of aging residents of Oahu.

The report was issued by the Legislative Reference Bureau, located at the University of Hawaii, Honolulu.

CHRONIC DISEASE—PROGRAMS

853. Ryder, Claire F. *(Div. of Chronic Diseases, U.S. Public Health Service, Washington 25, D.C.)*

A decalogue of challenges: chronic illness and disability. *J. Am. Dietetic Assn.* Sept., 1961. 39:3:193-197.

Ten components of a comprehensive program for the prevention of chronic illness and its medical care, including related services, are discussed in terms of current accomplishments and a wide variety of unmet needs. The paper is based on a joint presentation by the author and Elizabeth Caso, Cambridge (Mass.) Department of Public Health, at the 1960 annual meeting of the American Dietetic Association. Mrs. Caso's paper will appear in a later issue of the *Journal*.

See also 888.

CLEFT PALATE

854. Shepard, Earl E. *(225 S. Meramec Ave., St. Louis 5, Mo.)*

The habilitation of the congenital cleft palate patient. *Am. J. Orthodontics.* Feb., 1961. 47:2:124-145.

Causative factors leading to cleft lip and palate are recognized as defects in intrauterine development of the embryo during the second month of fetal life. Various theories pertaining to etiology have been advanced but data are still inadequate for substantiating the genetic theory. Research has proved clefts may be produced by environmental situations such as lack of oxygen or administration of cortisone to the mother during pregnancy. In the author's series of 93 patients, bilateral clefts occurred far in excess of the incidence reported by Davis in 1924. Discussed are the integration of services needed for total habilitation, the role of surgery, some modern technics used in repair, and the roles of the pediatrician, otolaryngologist, psychologist, restorative dentist, orthodontist, prosthodontist, and speech correctionist. Problems in orthodontic treatment of cleft palate are summarized. Data from analysis of the speech intelligibility of 8 patients, with and without dental speech aids, give conclusive proof of the value of speech therapy.

CLEFT PALATE—PSYCHOLOGICAL TESTS

855. Goodstein, Leonard D. *(East Hall, State Univ. of Iowa, Iowa City, Iowa)*

Intellectual impairment in children with cleft palates. *J. Speech and Hear. Research.* Sept., 1961. 4:3:287-294.

Degree and characteristics of intellectual impairment in a representative sample of children with cleft palates were studied in relation to performance of a matched control group of physically normal children. The Wechsler Intelligence Scale for Children, an individual, standardized intelligence test, was used; mean IQ's on the Verbal, Performance, and Full Scale tests were significantly lower for the cleft palate group than for the control group. Dr. Goodstein describes the extent of the differences in intellectual impairment and the primarily verbal nature of the deficits. Implications of the findings for educational and habilitative work with such children are considered.

COLLEGES AND UNIVERSITIES

856. Cantoni, Louis J. *(Wayne State Univ., Detroit 2, Mich.)*

48 handicapped college students. *Voc. Guidance Quart.* Summer, 1961. 9:4:268-270.

Of 48 severely disabled students enrolled at Wayne State University in the semester ending June, 1960, 31% were blind, the remainder being either orthopedically handicapped or persons with cardiac problems. Dr. Cantoni gives statistics on kinds of disability, the use of wheel chairs, crutches, braces, or artificial limbs, courses of study and academic level, part-time programs, outside employment, and financial aid received. Special services offered such students at Wayne State University are discussed briefly. An interesting finding was that 31% of the disabled students already held full-time jobs; 8 of the 15 blind students were employed full time while attending school part time.

DEAF—DIRECTORIES

857. Downs, Marion P. *(4200 E. Ninth Ave., Denver 20, Colo.)*

Hearing rehabilitation centers in the United States. *Arch. Otolaryngol.* Apr., 1961. 73:419-443.

A revised list, compiled in 1960, of 166 centers providing audiology and hearing rehabilitation services. Information included covers sponsorship of each, qualifications of personnel, types of service, clientele, administrative head, and equipment. Listing is alphabetical by state. An appendix contains requirements for basic and advanced certificates in hearing, set up by the American Speech and Hearing Association. This listing is the first to appear since 1958.

DEAF—SPECIAL EDUCATION

858. Quigley, Stephen P.

Institutionalization and psycho-educational development of deaf children, by Stephen P. Quigley and D. Robert Frisina. Washington, D.C., Council for Exceptional Children, 1961. 49 p. tabs. *(CEC Research Monograph, ser. A, no. 3)*

A report of a research project investigating effects of institutionalization on deaf children's ability to communicate in the English language and their educational achievement and psychosocial adjustment. Subjects were 120 day and 120 residential students at 6 residential schools located in 5 different regions of the U.S. The testing program included speech, speechreading, finger spelling, vocabulary, and psychosocial adjustment. Methods used in equating groups and in selection of participating schools and study subjects, as well as the procedures and instruments used in testing, are described. Background information on education of the deaf, on general problems of institutionalization, and on institutionalization as it applies to education of the deaf is given in the introductory chapter. The study found no evidence that living in residential schools is detrimental to deaf children's development; actually such schools are not identical to the type of environment termed institutional. Major differences in oral communication ability favored day students. The difference in adjustment scores, favoring residential students, indicated possible frustrations for male day students having to function with hearing persons after school hours. This is a problem that all deaf persons must face eventually, however.

Available from Council for Exceptional Children, 1201 16th St., N.W., Washington 6, D.C., at $2.00 a copy.

See also 837.

DIABETES

859. Neck, Laura Rentfro *(Texas Technological Coll., Lubbock, Tex.)*

Working with the diabetic client. *J. Rehab.* Sept.-Oct., 1961. 17:5:15-17.

A graduate psychologist with an OVR traineeship in vocational rehabilitation counseling describes the "diabetic personality" characteristics that appear to affect the client's ability to obtain and hold a job. Counselors must be aware of the psychological needs of such clients and realize that their emotional reactions to the work situation are the determining factor in degree of work stability. Types of work unsuitable for their temperament are discussed briefly. Mrs. Neck's article was the winning entry in the National Rehabilitation Association's Graduate Rehabilitation Literary Awards competition for 1961.

DRIVERS

860. Epilepsy and driving licences. *Brit. Med. J.* Aug. 19, 1961. 5250:506-507.

An editorial on a recent memorandum sent by the Ministry of Transport (Great Britain) to the Registration and Licensing Authorities in regard to issuing driving licenses to persons suffering from epilepsy. It is recommended that medical advice be sought in cases of doubt. In spite of the epileptic's reluctance to go on record as having the disorder (see *Rehab. Lit.*, Aug., 1961, p. 597), the memorandum offers encouragement to apply for the driver's license and should help to bring uniformity in licensing practices.

DRUG THERAPY

861. Peterson, Charles R. *(George Washington Univ. School of Medicine, 901 23rd St., N.W., Washington 7, D.C.)*

Electromyographic method for objective measurement of muscle relaxant drugs, by Charles R. Peterson and Charles S. Wise. *Arch. Phys. Med. and Rehab.* Aug., 1961. 42: 8:566-572.

A report of an objective method used in measuring effects of carisoprodol in 23 patients with spasticity due to upper motor neuron disease. Electromyographic technics were used to record patellar reflex during a control period and for approximately 2 hours following administration of the drug or placebo. Although studies reported here show a significant effect of the drug on the hyperactive patellar reflex in organic neurologic disease, no conclusions can be drawn regarding the drug's clinical effectiveness. The objective method of measurement does have value, the authors believe, for screening and comparative evaluation of neurospasmolytic agents.

EMPLOYMENT (INDUSTRIAL)—PLACEMENT

862. Employment Security Rev. Sept., 1961. 28:9.

Title of issue: New outlook for the handicapped.

Contents: Mainstream service to applicants with handicaps, James R. Wigton.—Changing physical demands of jobs, Emanuel Weinstein.—We practice what we preach, Kathryn Keep.—Solving the problems of the handicapped, Anna B. Tucker.—Abilities Workshop brings placements, Rosamond M. Murray.—A torch for the deaf, D. Ralph Carter.—Handicaps notwithstanding: 1. Twenty-five feet; to a new career, Louise Richard; 2. Second time is the charm, Richard Kinion; 3. He "sees" a brighter future, William A. Nevis; 4. A blind teacher of the blind, Boyd Clemens; 5. He always wanted to be a printer, Edward H. Weyler, Jr.—Less specialization; more service, Theodore R. Maughan.—Seated sales by the handicapped; telephone selling is the solution, Janet O. Wolfe.—UI and the physically handicapped, Ralph Altman.—An interagency conference makes good relations better, Ralph R. Lange.—Countdown to cooperation, John H. Biddick and Stanley R. Spencer.—Serving the mentally handicapped, Mildred J. Hughes.—The handicapped; a changing picture, A. B. Wells.

See also 897.

EPILEPSY

863. Holowach, Jean *(Dept. of Pediatrics, Washington Univ. School of Med., St. Louis 10, Mo.)*

Psychomotor seizures in childhood; a clinical study of 120 cases, by Jean Holowach, Yavuz A. Renda, and Irwin Wapner. *J. Pediatrics.* Sept., 1961. 59:3:339-346.

In the 120 cases reviewed 30% of patients were 3 years or less at age of onset; a third of the group had an obvious background of organicity and 25% were considered mentally deficient. One half of those who received psychological testing (29) exhibited disorders. The purpose of this paper is to document the common occurrence of such seizures, defining what the authors consider a highly typical clinical manifestation, and discussing the neurological and psychological features and medical management. The authors' findings further confirm Lennox's observations.

See also 833; 860.

EXERCISE

864. Perkins, Lois C. *(Duke Univ. Med. Center, Durham, N.C.)*

Results of short term isotonic and isometric exercise programs in persons over sixty, by Lois C. Perkins and Helen L. Kaiser. *Phys. Therapy Rev.* Sept., 1961. 41:9: 633-635.

Immediate and long-range effects of both types of exercise programs appeared essentially equivalent when administered to 20 persons ranging in age from 62 to 84 years. All were ambulatory and without seriously limiting physical disability. This study, illustrating the definite value of short-term exercise programs in the production and maintenance of strength in older persons, suggests that such programs, used periodically in institutions for the aged, could help to reduce nursing care requirements.

FACIAL PARALYSIS

865. Gregg, George *(40 Elmwood Ave., Belfast 9, N. Ire.)*

Some observations on Bell's palsy in Belfast during the period 1949 to 1958. *Arch. Phys. Med. and Rehab.* Aug., 1961. 42:8:602-608.

Following a brief discussion of the anatomy and pathology of Bell's palsy, the author gives an interpretation of clinical data recorded for 661 patients treated at the

Royal Victoria Hospital, Belfast, during the 10-year period. Annual incidence of Bell's palsy in Belfast is estimated at 160 cases per million population. Data cover frequency of onset—general trends and seasonal variation; age at first clinic visit, sex, side of face affected, incidence of hearing or taste being affected; duration and results of treatment; and presence of the Ramsey Hunt syndrome. All but 20 patients responded to treatment; 73% were considered to be cured, with treatment being completed in less than 30 days for 70% of the cured as compared with only 35% of those considered improved.

HEART DISEASE—PSYCHOLOGICAL TESTS

866. O'Connell, Desmond D. *(VA Hosp., Wood, Wis.)*

Level of aspiration in hypertensive cardiac patients compared with nonhypertensive cardiac patients with arteriosclerotic heart disease, by Desmond D. O'Connell and Richard M. Lundy. *J. Consult. Psych.* Aug., 1961. 25:4:353-359.

When level of aspiration was measured in terms of failure-oriented responses, hypertensives showed a higher level of aspiration response; it is hypothesized that the hypertensive group "arranged" for repeated failure by consistently setting excessively high goals. A further hypothesis is that continued failure is in some way associated with physiological withdrawal of blood from the arteriolar bed, resulting in increased blood pressure. The hypertensive reaction is considered not the direct result of general psychological stress but rather the avoidance reaction to the specific stress of continued failure.

HEMIPLEGIA

867. Edwards, Henry S. *(McGuire VA Hosp., Richmond, Va.)*

Proven rehabilitation measures for the hemiplegic patient; an authoritative guide, by Henry S. Edwards and A. Ray Dawson. *J. Rehab.* Sept.-Oct., 1961. 17:5:11-13.

A review of the technics of a rehabilitation program for the hemiplegic patient being treated at home or in a hospital without a rehabilitation service. Classification and identification of strokes, good nursing care, physical therapy and the exercise program, bracing, and aphasia are discussed. The vocational counselor and social worker can contribute to total rehabilitation through determination of employment potential and attention to the financial, social, and emotional problems of the patient and his family.

See also 833; 849.

HEMIPLEGIA—PSYCHOLOGICAL TESTS

868. Birch, Herbert G. *(Bronx Memorial Hosp., Pelham Pkway. & Eastchester Rd., New York 61, N.Y.)*

Perception in hemiplegia: III. The judgment of relative distance in the visual field, by Herbert G. Birch, Florry Proctor, and Morton Bortner. *Arch. Phys. Med. and Rehab.* Sept., 1961. 42:9:639-644.

Two earlier papers in this series (see *Rehab. Lit.*, Mar., 1960, #185, and the Feb., 1960, issue, *Arch. Phys. Med. and Rehab.*) indicated that, in hemiplegia, visual perceptions of vertical and horizontal co-ordinates of visual space were conjointly rotated and judgment of the median plane was systematically displaced. The present study investigated monocular and binocular judgment of relative object distance in 24 hemiplegic and 10 non-neurologically damaged patients. Monocular perception was impaired in hemiplegics but their binocular perception of such relations was not significantly different from that of the control group. Findings are discussed in terms of the impairment of inferential functioning in hemiplegics.

HOME ECONOMICS

869. Howard, Mildred S. *(Institute of Home Economics, U.S. Dept. of Agriculture, Washington 25, D.C.)*

Energy-saving kitchens; a basic approach to design of work areas. *J. Am. Dietetic Assn.* Sept., 1961. 39:3: 201-204.

In same issue: Factors affecting energy expended in homemaking tasks, Elaine Knowles Weaver and Doris E. Elliot. p. 205-208.

All available basic information on the human energy required for performing household tasks, including storage, has been utilized by the Institute of Home Economics in developing and testing, over the past 6 years, 3 kitchen designs. A summary of numerous basic studies is included. Energy-saving features incorporated in the designs are discussed. Source publications describing 2 of the designs are cited in the bibliography. (See also *Rehab. Lit.*, Apr., 1959, p. 128, under "Plans for kitchen-workroom . . .") A descriptive leaflet on the third design is in preparation. This article includes illustrations and floor plan of the second kitchen.

Dr. Weaver *(Dept. of Home Economics, Ohio Agricultural Experiment Station, Columbus)* and Miss Elliot discuss finding of a research study at the Experiment Station regarding caloric expenditure in bed-making, stair-climbing, and load-carrying. Height of bed was the only factor in energy expenditure; ascending stairs required more energy than descending; speed in ascending and descending stairs and position of arms may possibly influence expenditures in load-carrying.

HOMEBOUND—PROGRAMS

See 891.

MENTAL DEFECTIVES

870. Cromwell, Rue L. *(Dept. of Psychology, George Peabody College, Nashville 5, Tenn.)*

Selected aspects of personality development in mentally retarded children. *Exceptional Children.* Sept., 1961. 28:1:44-51.

A review of principles of learning fundamental to personality development in all children, with a discussion of certain experiences occurring more frequently with mentally retarded children and how they may lead to behavior patterns somewhat more typical of their group. Theories that suggest that different rates of growth of higher level motivational systems lead to differences in personality patterns of retarded and normal children of the same chronological age level are described.

See also 834; 848; 880.

MENTAL DEFECTIVES—PARENT EDUCATION

871. Zuk, G. H. *(St. Christopher's Hosp. for Children, 2600 N. Lawrence St., Philadelphia 33, Pa.)*

Maternal acceptance of retarded children; a questionnaire study of attitudes and religious background, by G. H. Zuk (and others). *Child Development.* Sept., 1961. 32:3:525-540.

A questionnaire survey of 125 mothers who had had contact with the Mental Retardation Clinic, St. Christopher's Hospital for Children, a nondenominational institution, revealed a low but positive correlation between measures of maternal acceptance and religious background. Catholic mothers, who rated themselves and their husbands more intense in religious practices than non-Catholic mothers, tended to verbalize attitudes judged more acceptant of their retarded children. Religious background correlated more positively with maternal acceptance when judgment of acceptance was based on attitude items involving dispositions toward discipline and overdependence. Authors of the study serve as psychologist, chaplain, and pediatrician at the Mental Retardation Clinic.

MENTAL DEFECTIVES—PSYCHOLOGICAL TESTS

872. Matthews, Charles G. *(Ft. Wayne State School, Ft. Wayne, Ind.)*

Response sets and manifest anxiety scores in a retarded population, by Charles G. Matthews and Leon H. Levy. *Child Development.* Sept., 1961. 32:3:577-584.

Although scores of 30 mildly retarded institutionalized males on the Children's Form of the Manifest Anxiety Scale appeared to be as stable as those of normal persons, the test is believed to be inapplicable as a measure of anxiety in mental defectives. On the basis of data from the current study, it was concluded that retardates' scores on the CMAS are strongly influenced by response sets, as well as by situational and capacity variables.

MENTAL DISEASE

873. Kellam, Sheppard G. *(Natl. Institutes of Health, Bethesda 14, Md.)*

A method for assessing social contact; its application during a rehabilitation program on a psychiatric ward. *J. Nerv. and Mental Dis.* Apr., 1961. 132:4:277-288.

Describes a social contact "map" called a *matrix* by its originators, who used the device to record quantity and pattern of contact of individual female patients on an open ward of a large psychiatric hospital; 24 of the 29 women studied had chronic schizophrenia. Advantages, limitations, and types of information recorded are discussed; the device is considered a useful supplement to any means of clinical assessment of patients. The information gathered does not in itself indicate whether or not a patient is improved but does show certain changes in several discrete aspects of social behavior. The method might be used for more documented reasearch into other interpersonal aspects of psychopathology.

874. Rehabilitation of the mentally ill. *J. Rehab.* Sept.-Oct., 1961. 17:5:21-40.

Contents: Dynamics of mental illness, Nina Magier.—Needs of the emotionally ill, Lloyd E. Fish.—Counseling the emotionally disturbed, William J. Eichman.—Action for mental health (condensation of: The final report of the Joint Commission on Mental Health and Illness).—Group activities in educational therapy, Otto Walter Feri, Marion D. Robb, and John L. Smith.—Music therapy for schizophrenics, Leo Shatin, Wallace L. Kotter, and Gladys Douglas-Longmore.—Industrial therapy; Vermont State Hospital OVR project, Howard Guyette and William N. Deane.—Returning the ex-patient to employment, Lebaron Moseley.—Employer receptivity, Simon Olshansky.—Welcome, Mademoiselle Marthe; (Birth of a modern psychiatric hospital, La Verriere, France).

MENTAL DISEASE—EMPLOYMENT

875. Adams, Edana

"Challenge and opportunity," a report on the National Association for Mental Health Conference, October, 1960. *Rehabilitation.* Jan.-Mar., 1961. 36:38-42.

A summary of the content of papers presented at the conference on "Advances in the Employment of the Mentally Disordered," held by the National Association for Mental Health (Gt. Brit.). Experiments in rehabilitating long-term hospitalized schizophrenic patients, public prejudice against the ex-mental patient, the need for early training to fit the mental defective for work and life in the community, and the employer's point of view were discussed. Experiences of the Industrial Therapy Organization (Bristol), providing realistic vocational training for mental patients in hospitals, were encouraging. The difficulties of finding lodgings for released mental patients was noted. Employers emphasized that patients should not be released for work until the hospital authorities could assure they were fit for work. The employer should be told what such employees could and could not do.

876. Wadsworth, W. V. *(Cheadle Royal Hosp., Cheadle, Cheshire, Eng.)*

Employability of long-stay schizophrenic patients, by W. V. Wadsworth, R. F. Scott, and B. W. P. Wells. *Lancet.* Sept. 9, 1961. 7202:593-595.

An article covering the same sample of patients described in the authors' recent article in the Apr.-June, 1961, issue of *Rehabilitation* (see *Rehab. Lit.*, Sept., 1961, #707). Statistical data based on observations of the output, behavior, and reactions of the schizophrenic group and the control group are included here but omitted from the general discussion in the earlier article.

MENTAL DISEASE—PROGRAMS

877. Bennett, Douglas *(Netherne Hosp., Coulsdon, Surrey, Eng.)*

Resettlement unit in a mental hospital, by Douglas Bennett, Steven Folkard, and Audrey K. Nicholson. *Lancet.* Sept. 2, 1961. 7201:539-541.

Results achieved in 3 years' operation of a small unit of Netherne Hospital (England), a large villa adapted to house about 40 men and 50 women patients considered to have rehabilitation potential. Activities of the unit are planned to prepare patients for life outside the hospital; many work daily in the community. Administration of the unit, role of the local industrial rehabilitation unit, staff and their responsibilities, the use of drugs in psychiatric treatment, and some factors hindering complete rehabilitation are discussed.

878. Turner, Ethel *(Instructive Visiting Nurse Assn., Baltimore, Md.)*

Home service for the mentally ill, by Ethel Turner and A. Lillian Scally. *Nursing Outlook.* Sept., 1961. 9:9: 541-545.

In same issue: An after-care program for patients discharged from mental hospitals, Richard Fleming, David M. Grayson, and Winifred McLanahan. p. 544-547.

Describes a co-operative project of a state-supported mental hospital and a voluntary public health nursing service to aid the hospitalized mentally ill patient and his family during hospitalization and after return home.

Dr. Fleming *(522 N. Neville St., Pittsburgh, Pa.)* and his coauthors discuss the role of the public health nurse in providing nursing services for discharged mental patients living at home, as part of the mental health program of the Visiting Nurse Association of Allegheny County (Pa.). Data from a study of the therapeutic value of home visits by nurses to 16 discharged patients proved useful to the agency in assessing its service and to the hospital working with patients returned after unsuccessful home stay.

See also 888.

MENTAL DISEASE—RESEARCH

879. U.S. National Institute of Mental Health

Private support for mental health; a study of the support, by foundations and other private national granting agencies, for mental health and related disciplines, by Jeanne L. Brand. Washington, D.C., Govt. Print. Off., 1961. 45 p. figs., tabs. *(Public Health Serv. publ. no. 838)*

Current policies of foundations and other private national granting agencies toward support of mental health activities are analyzed from data supplied by the organizations. Fields and types of support, annual estimated amounts granted, types and staffing of organizations, sources of program determination, review of applications, foundation relations with grantees, and future trends are discussed. An annotated list of the reporting organizations appears in the appendix, giving assets, type of support, fields of interest, and special comments. An index to organizations' fields of interests and types of support is included.

Available from U.S. Superintendent of Documents, Government Printing Office, Washington 25, D.C., at 35¢ a copy.

MENTAL HYGIENE

See 832.

MULTIPLE HANDICAPS—GREAT BRITAIN

880. Quibell, E. P. *(Chailey Heritage Craft School and Hosp., N. Chailey, Lewes, Sussex, Eng.)*

A survey of a group of children with mental and physical handicaps treated in an orthopaedic hospital, by E. P. Quibell, Elspeth Stephen, and Elizabeth Whatley. *Arch. Diseases in Childhood.* Feb., 1961. 36:185:58-64.

An evaluation of the response to treatment of 40 physically and mentally handicapped children at Chailey Heritage, ranging in age from 2 to 16 years; none had been at the hospital less than a year. The 2 main groups were mentally handicapped children with cerebral palsy or spina bifida with associated myelomeningocele. Of 26 children unable to walk on admission, 19 have made worthwhile progress in ambulation. Of 36 children, 31 showed improvement in daily living functions, including speech (4 were omitted because they were independent on these functions at admission). In the authors' opinion this survey indicates such children can respond to a program that includes medical treatment, special education, and a wide range of training in daily life functions.

A brief discussion of the survey results appeared in an editorial in *Lancet,* July 15, 1961 (7194:144), urging that more be done than is presently being provided, to lessen the care of such children.

MULTIPLE SCLEROSIS—ETIOLOGY

881. Kennedy, Charles *(Children's Hosp. of Philadelphia, 1740 Bainbridge St., Philadelphia 46, Pa.)*

Relation of optic neuritis to multiple sclerosis in children, by Charles Kennedy and Sidney Carter. *Pediatrics.* Sept., 1961. 28:3:377-387.

From a previously reported series of 30 children with optic neuritis of unknown cause, 8 were found to have developed multiple sclerosis in variable periods after the episode of visual failure. Six of the children developed evidence of dissemination within a 2½-year period; in the other 2, dissemination did not occur until 12 and 16 years later. In the clinical findings reported here in detail, no distinctive characteristics of the ocular findings indicated those who would eventually show evidence of multiple sclerosis. 25 references.

MULTIPLE SCLEROSIS—MEDICAL TREATMENT

882. Miglietta, Osvaldo *(Bird S. Coler Hosp., Welfare Island, New York 17, N.Y.)*

A study of peripheral nerve involvement in fifty-four patients with multiple sclerosis, by Osvaldo Miglietta and Milton Lowenthal. *Arch. Phys. Med. and Rehab.* Aug., 1961. 42:8:573-578.

The findings of a study of 54 patients with multiple sclerosis (34 female, 20 male) in a municipal chronic disease hospital do not lend support to previous statements regarding the involvement of peripheral nerves in multiple sclerosis. Only 3 of this series of patients were found to have one or more peripheral nerves involved; summaries of findings in these cases is included. In 2 of the patients the lesion was clearly due to compression. The authors recommend that careful consideration and attention be given to positioning of patients in bed, wheel chair, or Stryker frame in order to avoid further damage. Signs and symptoms of the peripheral type of lesions may exist in early and acute stages of multiple sclerosis but eventually disappear and are not more evident in the chronic stage of the disease.

See also 829.

MUSCULAR DYSTROPHY—PSYCHOLOGICAL TESTS

883. Worden, Don Keith *(Southeastern Ohio Guidance Center, Athens, Ohio)*

The intelligence of boys with muscular dystrophy. *J. Consult. Psych.* Aug., 1961. 25:4:369.

Intelligence and achievement tests administered to 38 school-age boys with muscular dystrophy, 16 with amyotonia congenita, and to 36 diabetics and 36 diabetic-siblings indicated that those with pseudohypertrophic muscular dystrophy differed significantly from all control groups. Their IQ's and EQ's were both below average and did not differ from one another. However, their achievement quotients indicated they were doing all one could expect for children of their mental ages. In this particular study intellectual deficit seemed specifically associated with the factor of having muscular dystrophy.

An extended report of the study is available from the author.

NEUROLOGY

884. Rosenthal, Aaron M. *(1166 Phil-Ellena St., Philadelphia 50, Pa.)*

Electrodiagnostic testing in neuromuscular disease. *J. Am. Med. Assn.* Sept. 23, 1961. 177:12:829-833.

General principles involved in testing procedures, the information that can be obtained from routine testing that would be helpful in making a differential diagnosis, and the 3 major types of tests are discussed. No attempt has been made to cover all of the possible tests which can be performed. Dr. Rosenthal notes that testing a patient with only upper motor neuron disease will result in normal findings; only lower motor neuron disease or myopathic disease will show abnormality. For those interested in more detailed information, the references in the bibliography should be useful.

See also 829; 830; 831; 833.

NUTRITION

885. Piper, Geraldine M. *(Div. of Chronic Diseases, U.S. Public Health Service, Washington 25, D.C.)*

Nutrition in coordinated home care programs. *J. Am. Dietetic Assn.* Sept., 1961. 39:3:198-200.

The role of the dietitian or nutritionist in home care programs is largely a consultative and supportive one since she rarely has direct contact with the patient. Functions may include: participation as a team member in the planning conference at time of patient's admission to the program; inservice staff education on general food needs and ways of adapting existing food patterns; participation in periodic review of changing food needs; keeping of records; and supplying information on patient's dietary needs on referral forms when patient is transferred from hospital to home care program. Co-ordinated home care programs provide opportunity for field or intern work for students in dietetics or public health nutrition.

OCCUPATIONAL THERAPY

886. Waterston, Jean *(Astley Ainslie Hosp., Edinburgh, Scot.)*

Occupational therapy and resettlement. *Rehabilitation.* Jan.-Mar., 1961. 36:5-9, 11.

Responsibilities of the occupational therapist in the rehabilitation of disabled persons include, in the treatment stage, evaluation of the patient's abilities and difficulties, training in daily living activities and the use of public transportation, teaching acceptance of disability, building work tolerance, and overcoming the effects of long-term hospitalization. In the recovery phase of the rehabilitation program, if placement cannot be found immediately, the therapist can provide some type of work to maintain treatment gains and improve psychological outlook. The writer illustrates how rehabilitation programs are implemented through co-operative efforts of the rehabilitation center, government agencies, and industrial accident boards.

OLD AGE

See 828; 835; 864.

OLD AGE—MEDICAL TREATMENT

887. Yaffe, Harry *(Beth Israel Hosp., 1601 Lowell Blvd., Denver 4, Colo.)*

A working program of health care for the aged. *Hospitals.* Sept. 1, 1961. 35:17:58, 60, 62.

Co-operative relations between the general hospital and the home for the aged insure hospital admission of home residents in need of such care. Other advantages are outpatient use of hospital's diagnostic and therapeutic facilities, assignment of hospital staff to regular service in the home, and training of interns and residents in geriatric medicine. Experience at Beth Israel Hospital and Home, Denver, has proved that integration of services insures comprehensive preventive and rehabilitative care.

OLD AGE—PSYCHOLOGICAL TESTS

888. Dobson, William R. *(VA Hosp., Salt Lake City, Utah)*

A behavioral evaluation of geriatric patients living in nursing homes as compared to a hospitalized group, by William R. Dobson and Tom W. Patterson. *Gerontologist.* Sept., 1961. 1:3:135-139.

Chronic geriatric patients, with the major diagnosis of schizophrenia or chronic brain syndrome, have been transferred from Ft. Douglas VA Hospital, Salt Lake City, to privately operated nursing homes when they no longer need hospitalization for acute medical problems. The program, in operation for several years, is described. This study attempted to assess the comparative physical and behavioral adjustment of nursing home and hospitalized patients. Physical and psychological ratings, at the time of patients' entry at nursing homes and after a year's residence, indicated no significant differences between hospitalized and nursing home patients, in terms of nursing care needed or in behavioral adjustment. With one exception, all nursing home patients preferred the home to the hospital.

PARALYSIS AGITANS

See p. 326; 831.

PARAPLEGIA—EQUIPMENT

889. Kim, Ki Ho *(Kessler Institute for Rehabilitation, Pleasant Valley Way, West Orange, N.J.)*

The Kim Self-Stander for wheelchair patients (a self-help device). *Arch. Phys. Med. and Rehab.* Aug., 1961. 42:8:599-601.

This electrically operated standing device that adjusts to fit the individual patient eliminates need for assistance for quadriplegics (level 6th, 7th, and 8th cervical vertebrae). Also useful for those with lesions at the 5th and 6th level (only minimum assistance required) and for high cord level paraplegics who are not functionally ambulatory (eliminates need for long-leg braces). Operational features, cost and source of supply, and instructions for operating the device independently or with the assistance of one person are covered. Selling for slightly more than long-leg braces, the machine should be most useful, especially to patients being cared for at home.

PARAPLEGIA—MEDICAL TREATMENT

890. Steinberg, Franz U. *(216 S. Kingshighway Blvd., St. Louis 10, Mo.)*

The rehabilitation of the paraplegic patient. *South. Med. J.* June, 1961. 54:6:658-661.

A study of 21 patients with paraplegia of traumatic origin indicated that the rehabilitation program offered at the Jewish Hospital, St. Louis, has been successful, in almost all patients, if independence in self-care is an adequate measure of success. Those with sufficient motivation succeeded in returning to work or to school. Too much time and effort should not be expended on brace-walking since it is, at best, an auxiliary form of locomotion and, for most patients, simply a form of physical exercise. Facilities of the hospital's division of rehabilitation are described, as well as the management of complications associated with paraplegia.

POLIOMYELITIS—PROGRAMS

891. Harrison, G. M., Jr. *(Texas Institute for Rehab. and Research, P.O. Box 20095, 1333 Moursund Ave., Houston 25, Tex.)*

The medical and social outcome of 200 respirator and former respirator patients on home care, by G. M. Harrison, Jr., and Maurine B. Mitchell. *Arch. Phys. Med. and Rehab.* Aug., 1961. 42:8:590-598.

Data from a comprehensive follow-up of former patients at the Southwestern Poliomyelitis Respiratory and Rehabilitation Center indicate that success of the home care program and the extent to which patients resume their former role in the family and society are based primarily on psychosocial factors rather than on physical disability and medical problems. Medical, social, and economic situations of patients were evaluated during 5-day hospitalizations. It is recommended that evaluations be conducted annually. It has been concluded that totally apneic and quadriplegic postpoliomyelitic patients can be handled safely and comfortably at home; the majority of severely disabled patients can lead fairly normal and satisfactory lives when adequate preparations are made for home care and good medical follow-up is available.

PSYCHOLOGICAL TESTS

892. Downing, Robert W. *(Children's Seashore House, Atlantic City, N.J.)*

Studies of disability; a technique for measurement of psychological effects, by Robert W. Downing, George Moed, and Byron W. Wight. *Child Development.* Sept., 1961. 32:3:561-575.

The first report of a research project investigating social and psychological effects of disability and institutionalization on the growth and development of children. Data were obtained on 41 children, from 7 to 19 years of age, who had been hospitalized and immobilized for about 2 years with Legg-Perthes disease. However, they had since been returned to the community in a relatively intact condition. The test for measuring connotative meaning employed particular concepts designed specifically for use with disabled children. Data are also included relating to reliability, independence of the Evaluative, Potency, and Activity factors, and the general applicability of the test for age and sex subgroups.

893. Johnson, Orval G. *(1010 S. Bowen St., Jackson, Mich.)*

Psychologists' judgments of physical handicap from H-T-P drawings, by Orval G. Johnson and Frank Wawrzaszek. *J. Consult. Psych.* Aug., 1961. 25:4:284-287.

The test was administered to 37 elementary school children from special classes (all handicapped) and to an equal number of nonhandicapped controls. Drawings were judged by 9 psychologists experienced in work with children; the majority had worked with the physically handicapped. Purpose of the study was to determine whether or not physically handicapped children project into their drawings any feelings about their handicaps, to the extent that the handicap can be detected by psychologists analyzing the drawings. Characteristics of drawings that psychologists used to postdict which of a matched pair of children was handicapped were investigated. Percentage of correct judgments for any one psychologist was not significantly above chance; when judgments were pooled, the combined percentage correct was significantly greater than chance. A strong tendency was for judges to attribute the drawing with the higher Goodenough score to the nonhandicapped child.

See also 900.

REHABILITATION

894. Whitehouse, Frederick A. *(Am. Heart Assn., 44 E. 23rd St., New York 10, N.Y.)*

Rehabilitation as a dimension of human welfare. *J. Rehab.* July-Aug. & Sept.-Oct., 1961. 17:4 & 5. 2 pts.

In this philosophical discussion of the strengths, weaknesses, and causes for dissension among professions and lay organizations providing rehabilitation services, Dr. Whitehouse illustrates his views through allegorical "interviews" with "devils" and "angels" to reveal what could be accomplished if vested interests, prestige, and economic considerations were forgotten. He traces the public's attitudes toward the disabled over the centuries, the evolution of the rehabilitation concept, the social concepts basic to rehabilitation philosophy, and why rehabilitation should be considered one of the many dimensions of public welfare. Considered one of the foremost writers today on the subject of rehabilitation, the author has organized and directed the rehabilitation program of the American Heart Association since 1953.

See also 833.

REHABILITATION—GREAT BRITAIN

895. Weir, I. B. L. *(Med. Officer of Health, Dundee, Scot.)*

Local authorities' responsibilities for the handicapped. *Rehabilitation.* Jan.-Mar., 1961. 36:13-22.

National legislation in Great Britain has given local authorities broad permissive powers to establish welfare schemes for the handicapped; however, except for care of the blind and aftercare of the tuberculous, no directives for implementing services have been issued. Dr. Weir reviews various approaches to broadening services, illustrating the discussion with schemes employed in Dundee. Much of the work is carried out by voluntary agencies under the direction of the local authority; co-ordination of local resources has resulted in a wide variety of services.

REHABILITATION—BIBLIOGRAPHY

See p. 338.

REHABILITATION—PROGRAMS

896. International Congress of Physical Medicine

Role of government in rehabilitation (a panel discussion at the Third International Congress . . . Special session . . . August 25, 1960; Frank H. Krusen, chairman). *Arch. Phys. Med. and Rehab.* Sept., 1961. 42:9: 661-682.

The role of the Public Health Service in research, service, and provision of facilities for rehabilitation was discussed; it was suggested that both voluntary agencies and government should work to improve and expand services to provide for unmet needs. Some panel members expressed the view that entrance of government into the field of individual health might depersonalize and dehumanize medical service. Dr. Christopher B. Wynn Parry and the Hon. Gudmund Harlem described government rehabilitation programs in their respective countries, England and Norway.

Other panel members were: Dr. Frank H. Krusen, Dr. Leroy E. Burney, Rep. John E. Fogarty, Senator Hubert H. Humphrey, Dr. Leonard Larson, and Miss Mary E. Switzer.

REHABILITATION—SURVEYS—MINNESOTA

897. Minnesota. University. Industrial Relations Center

Minnesota studies in vocational rehabilitation: XI. Attitudinal barriers to employment, by Vera Myers Schletzer (and others). Minneapolis, The Center, 1961. 76 p. tabs., forms. *(Bul. no. 32, June, 1961)*

Personnel managers (800) and first-line supervisors (510) were surveyed by mail concerning their attitudes toward hiring the physically handicapped for private industry; generally favorable attitudes toward such persons were expressed. Most items pertaining to personal characteristics of the partially handicapped evoked favorable comment. Contrary to opinions expressed in previous surveys of a similar nature, cost of hiring the handicapped was not considered of major importance. Some fairly specific attitudes that seemed unfavorable were indicated. Efforts to "educate" representatives of private industry have been successful but the knowledge has not appreciably increased employment of the handicapped. It is suggested that a new approach be taken to the problem through exploration of job demands and potentials of the handicapped with individual companies.

Numbers VI through XI of the *Minnesota Studies in Vocational Rehabilitation* (see listing in *Rehab. Lit.*, Aug., 1960, #610) are still available at no cost, as long as the supply lasts, from the Industrial Relations Center, University of Minnesota, Minneapolis 14, Minn.

REHABILITATION CENTERS—GREAT BRITAIN

898. Edwards, J. L. *(Ministry of Labour, London, Eng.)*

Scheme for a comprehensive rehabilitation and assessment centre in the United Kingdom. *Rehabilitation.* Jan.-Mar., 1961. 36:33-37.

In same issue: Industrial rehabilitation units, A. P. D. Ross. p. 23-29.

Describes a combined rehabilitation and assessment center, incorporating both a medical and an industrial unit, that is being planned for Glasgow. It will be located in the grounds of a large hospital; a limb and appliance unit will be located adjacent to the center to provide for the fitting of artificial limbs and other prosthetic appliances. Division of administrative responsibilities is discussed. The center will be a joint venture of the Scottish Western Regional Hospital Board and the Ministry of Labour. This paper was presented at the 8th World Congress of the International Society for Rehabilitation of the Disabled in 1960.

Mr. Ross *(Ministry of Labour and Natl. Service, Edinburgh)* describes the typical industrial rehabilitation unit, its facilities, and the responsibilities of those administering its services. There are currently 15 such units (factories engaged in production work). Data are included from an analysis of clients served during 1958-1959.

RELIGION

See 832; 871.

SHELTERED WORKSHOPS—GREAT BRITAIN

899. Gregory, J. T. *(London Assn. for the Welfare of the Physically Handicapped, 31 John St., London, W.C. 1, Eng.)*

Employment and diversionary occupation for the handicapped. *Rehabilitation.* Jan.-Mar., 1961. 36:46-49.

Schemes providing sheltered employment for the more seriously handicapped in Great Britain are reviewed briefly; all are approved by the Ministry of Labour and receive deficiency grants. Those accepted for employment must demonstrate by the end of their training period a satisfactory minimum earning capacity. Diversionary occupation is provided either in day centers or for the homebound. Ways by which the Ministry of Labour could encourage the expansion of both types of services to the handicapped are suggested.

SHELTERED WORKSHOPS—ADMINISTRATION

900. Feingold, Sol *(United Cerebral Palsy of Queens, Inc., 88-56 163rd St., Jamaica 32, L.I., N.Y.)*

Sociometric studies in a sheltered workshop. *Voc. Guidance Quart.* Summer, 1961. 9:4:275-276.

One area of unmet needs in the sheltered workshop for

the mentally retarded is related to interpersonal relations and adequate social adjustment. Four objectives are listed but more information on the dynamics of the social situation in the sheltered workshop is needed. The writer reports findings of a study of 18 young adults to determine factors influencing choice of friends; IQ was more closely associated with choice of friends than CA. The use of social age as a measure in future studies is urged; Mr. Feingold is currently testing the hypothesis that social age and choice of friends would give the highest correlation. Problems in such research are discussed briefly.

SPECIAL EDUCATION—GREAT BRITAIN

901. Great Britain. Ministry of Education

Education in 1960; . . . the report of the . . . and statistics for England and Wales. . . . London, H. M. Stationery Off., 1961. 325 p. illus., tabs. *(Cmnd. 1439)*

The Ministry of Education's annual report of progress during the 1959-1960 school year. A full account of school health services has been given in the Chief Medical Officer's Report, "The Health of the School Child" (see *Rehab. Lit.*, Apr., 1961, #305). Chapter II of the current report covers services to handicapped pupils, their special educational treatment, and the special facilities provided. In the statistical section, Tables 15 to 21 (p. 170-176) give a breakdown of number and types of special schools, pupils served, teachers employed, and an analysis by categories of handicapping conditions. The Minister's Advisory Committee on Handicapped Children still has under consideration the problem of placement and education of children with dual or multiple handicaps.

Available in the U.S. from British Information Services, 45 Rockefeller Plaza, New York 20, N.Y., at $2.90 a copy.

SPECIAL EDUCATION—EQUIPMENT

902. Stolurow, Lawrence M.

Teaching by machine. Washington, D.C., U.S. Off. of Education, c1961. 173 p. figs., tabs. *(OE-34010: Cooperative Research monograph no. 6)*

The information on machine systems, types of teaching machines, concepts and technics of programing, research findings, and the impact of machines on research in learning is surveyed; many of the findings are from a cooperative research project currently underway at the University of Illinois. The potentialities of autoinstruction or automated teaching as a possible solution to critical problems of education are considered. Dr. Stolurow, professor of psychology and director of the project, has contributed articles to the literature on the use of teaching machines in special education and current research problems being investigated (see *Rehab. Lit.*, Oct., 1961, #780; Dec., 1960, #976; and Nov., 1960, #868).

Available from U.S. Superintendent of Documents, Government Printing Office, Washington 25, D.C., at 65¢ a copy.

SPEECH CORRECTION—DIRECTORIES

See 857.

Events and Comments

ICD Issues Final Report On Cerebral Palsy Work Classification Project

THE TWO-VOLUME *Final Report of the Cerebral Palsy Work Classification and Evaluation Project, 1955-1960* was released in October by the Institute for the Crippled and Disabled *(400 First Ave., New York 10, N.Y.)*. Martin G. Moed was co-ordinator of the Project, which was supported in part by grants from the U.S. Office of Vocational Rehabilitation. The Project was sponsored by five agencies, the Division of Vocational Rehabilitation and the Employment Service of New York State, United Cerebral Palsy of New York City and of Queens, and the Institute for the Crippled and Disabled.

Goals of the Project were: 1) to try to establish a standardized operating procedure designed for the observation and evaluation of each individual in a work setting that would be of practical value to other communities throughout the country; 2) to deal practically with immediately pressing vocational problems of the cerebral palsied adult awaiting service; and 3) to start developing a broad work classification system based on the individual's generalized motor organization, including hand and finger control, visual motor co-ordination, speech, special senses, intelligence, emotional functioning, and vocational performance in the work setting.

Volume I, in the form of a manual, contains a résumé of procedures fulfilling the first objective, and Volume II reports on findings that pertain to the second two objectives of the study. The first volume can be used by agencies contemplating the establishment of a similar evaluation project. Methods are based on the 5-year experience just completed. The manual will replace the booklet *Evaluating the Vocational Potential of the Cerebral Palsied,* published in May, 1957.

Arthritis Found Unaffected By Temperature of Climate

LIVING in a warm or cool climate was found to have no effect on incidence or "cure" of arthritis. The Arthritis and Rheumatism Foundation points out that the recent nation-wide U.S. Public Health Survey of chronic diseases shows arthritis, which afflicts 12 million Americans, occurring at similar rates in all parts of the country: 58.8 per 1,000 population in the northeast; 65 in the north central states; 66.5 in the south; and 64.7 in the west.

Office of Education Research Projects Reported for 1960

IN THE FISCAL YEAR 1960 the Cooperative Research Program of the U.S. Office of Education gave grants in aid to 121 projects. These projects are identified in Bulletin 1961, No. 18, *Cooperative Research Projects, Fiscal 1960 (OE-12004-60)*, the fourth in the annual series of such reports. The Program was initiated under Public Law 531, enacted in 1954 by the 83rd Congress. Of 1,200 research applications that have been submitted, 372 were recommended for support by the advisory committee and approved by the Commissioner of Education. Congress has appropriated over $12 million since 1957, some $3.2 million for 1960 and $3.4 million for 1961. For the same 5-year period, over $9 million have been contributed by the 104 colleges and universities and 16 state educational agencies sponsoring the projects. In 1960, seven of the educational projects pertained specifically to the mentally retarded and nine others had to do with the blind, deaf, speech-handicapped, and brain-injured. The report is available from the U.S. Superintendent of Documents, Washington 25, D.C., at 30¢ a copy.

A Comment on

The Immaturity of Adult Spastics

"UNDOUBTEDLY the fascinating feature of the spastic is his or her cheerfulness. But it is the superficial cheerfulness of the child. There is no evidence of spiritual conflict, mental or moral despair, of a mind which can work its way through doubts and uncertainties—all of which go to make the mature individual. My experience, of course, is limited to the spastic who is so heavily handicapped that only a residential centre can fulfil his need. . . . At the same time I am persuaded that the condition of emotional immaturity is due to the handicap and not to the particular circumstances of life. We have residents who have experienced the family life which would in reasonable circumstances have produced a greater maturity than the spastic is capable of. I think that the confusion and the inability to select a process of thought without emotion is due to brain damage, and that where the brain damage is considerable, as it is with the more heavily handicapped, we need to be equipped and prepared to consider spastics in residential centres as emotionally immature."—*From "Immaturity in Adult Spastics," by J. H. Watson (Warden, Prested Hall Residential Centre, Feering, Colchester, Essex, England).* Medical World, *Aug., 1961, p. 131.*

Dissertations in Social Work Reported

IN EACH SEPTEMBER ISSUE of *Social Service Review* (University of Chicago Press, Chicago 37, Ill.), one finds a section of abstracts of completed doctoral dissertations and a listing of others in preparation.

In the September, 1961, issue, our readers will note with interest the abstract of "Family Disorganization as Associated with Severity of Handicap (by Cerebral Palsy) of a Minor Child," by William T. Hall (Minnesota, Ph.D., June, 1961). In the study, conducted in Minneapolis and St. Paul, mothers of 30 children with severe handicaps and those of 30 with mild handicaps were visited unannounced by the investigator, who conducted a semistructured interview focusing on patterns of family interaction and transaction. Findings indicated that, when a family has a severely cerebral palsied child, family relationship-family unity scores are lower, mothers have significantly more feelings of continued guilt, denial, and futility, residence is more stable, mothers are more apt to remain in the home, and families are more acutely aware of gaps in community services.

Of the listed dissertations in preparation, those relating to rehabilitation include:

Ehlers, Walter H., "An Investigation into Some Aspects of the Impact of the Severely Mentally Retarded Child upon His Family," Brandeis, November, 1960.

Gibson, Hugh Wesley, "Clinics for Retarded Children: An Appraisal of the Effect of Organizational Structure on Service and an Exploration in Evaluative Methodology." Ohio State, April, 1958.

Nash, Marygold, "A Study of the Attitudes Toward the Orthopedically Handicapped Person as Seen in a Specific Number of Persons Who Express Willingness To Have Such a Person in Their Homes." Columbia, June, 1960.

Sieder, Violet M., "The Community Organization Function of the Direct-Service Agency, with Particular Reference to State Vocational Rehabilitation Services." Brandeis, November, 1960.

Sy-Quimsian, Ester B., "A Study of the Beginning of an Agency—Central Rehabilitation Referral Service—with Special Reference to Sources of Referral, Some Characteristics of Clients, and Agency Disposition in Terms of Implications for Community Participation." Pennsylvania, April, 1960.

Pueblo, Colo., Goodwill Receives NIH Grant for Work Project with Mentally Ill

A GRANT of $190,000 has been made by the National Institutes of Health for a 5-year research and demonstration project, now in progress at Goodwill Industries, Pueblo, Colo. The project provides for a therapeutic transitional experience from hospital to community for chronically ill mental patients and for accurate assessment by a research center of beneficial or nonbeneficial factors in the Goodwill Industries. The Project staff will include a psychiatric social worker, a rehabilitation counselor, four work supervisors, a consulting psychologist, and a counseling psychiatrist.

Kenny Rehabilitation Nursing Courses Offered in 1962

SCHOLARSHIP COURSES especially designed for nursing instructors, nursing supervisors, head nurses, and public health nurses will be held throughout 1962 at the Kenny Rehabilitation Institute, Minneapolis, Minn. The 3-week inresidence programs include lectures and practical experience in the rehabilitation nursing of hemiplegics, paraplegics, quadriplegics, amputees, and patients with poliomyelitis, cerebral palsy, and other severely disabling conditions. Early care of the patient is stressed.

Courses are scheduled for: January 15-February 2; March 5-23; April 23-May 11; June 11-29; July 30-August 17; September 10-28; October 22-November 9; November 26-December 14.

Additional information may be obtained by writing: Catherine Haas, R.N., Supervisor, Kenny Rehabilitation Nursing Course, Kenny Rehabilitation Institute, 1800 Chicago Ave., Minneapolis 4, Minn.

New Jersey Initiates Programs For Heart and Stroke Patients

CAMDEN COUNTY, N.J., in July began a program for the comprehensive rehabilitation of the stroke patient, with the acceptance of the first 5 of an anticipated patient load of 50. The West Jersey Hospital, Cooper Hospital, the Camden Visiting Nurse Association, and the N.J. Department of Health are co-operating. Dr. Aaron Rosenthal, a physiatrist with the University of Pennsylvania Hospital, as project medical director, supervises the rehabilitation program of each patient. Effective and economic methods using the team approach will be demonstrated for a period of 6 months, stressing continued care from hospital to home, outpatient department, or nursing home.

The Orange Memorial Hospital, Orange, N.J., co-operating with the N.J. Department of Health, is extending a home care program for cardiacs. Another such program is to be initiated in Passaic County, with all county hospitals co-operating with the Beth Israel Hospital of Passaic.

Barnert Memorial Hospital, Paterson, and St. Michael's and St. Barnabas hospitals, Newark, now have work classification units to test capabilities of cardiacs for employment.

Winner of Margaret Rapp Prize Begins Studies in United States

SPECIALIZED STUDIES in amputee rehabilitation were begun in September by Dr. Job van der Maas, a 35-year-old disabled war veteran from Groningen, The Netherlands. The $1,500 Margaret Rapp prize, established in memory of Miss Rapp, a director of administration of the World Veterans Federation, was awarded to Dr. van der Maas by the Federation last May. He also received a $1,000 scholarship from the World Rehabilitation Fund.

Dr. van der Maas will study at the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, the Institute for the Crippled and Disabled, and the Veterans Administration Prosthetics Center, all in New York, and at the Kessler Institute in West Orange, N.J. Dr. van der Maas lost his right leg after being wounded in action in Indonesia in 1948.

Rules Adopted To Govern Employment of Israeli Workers

THE HISTADRUTH, the Israeli Confederation of Labor Unions, and representatives of industry have signed an agreement regulating the bases of payment of handicapped workers in Israel and conditions of their employment and discharge. This affects the employment of 12,000 workers. The agreement provides for a trial period for the handicapped double that for the able-bodied.

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